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NOVEMBER 1982

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FOR TRAFFIC & TRANSPORTATION DECISION MAKERS

11TH ANNUAL
DISTRIBUTION
CAREER PATTERNS

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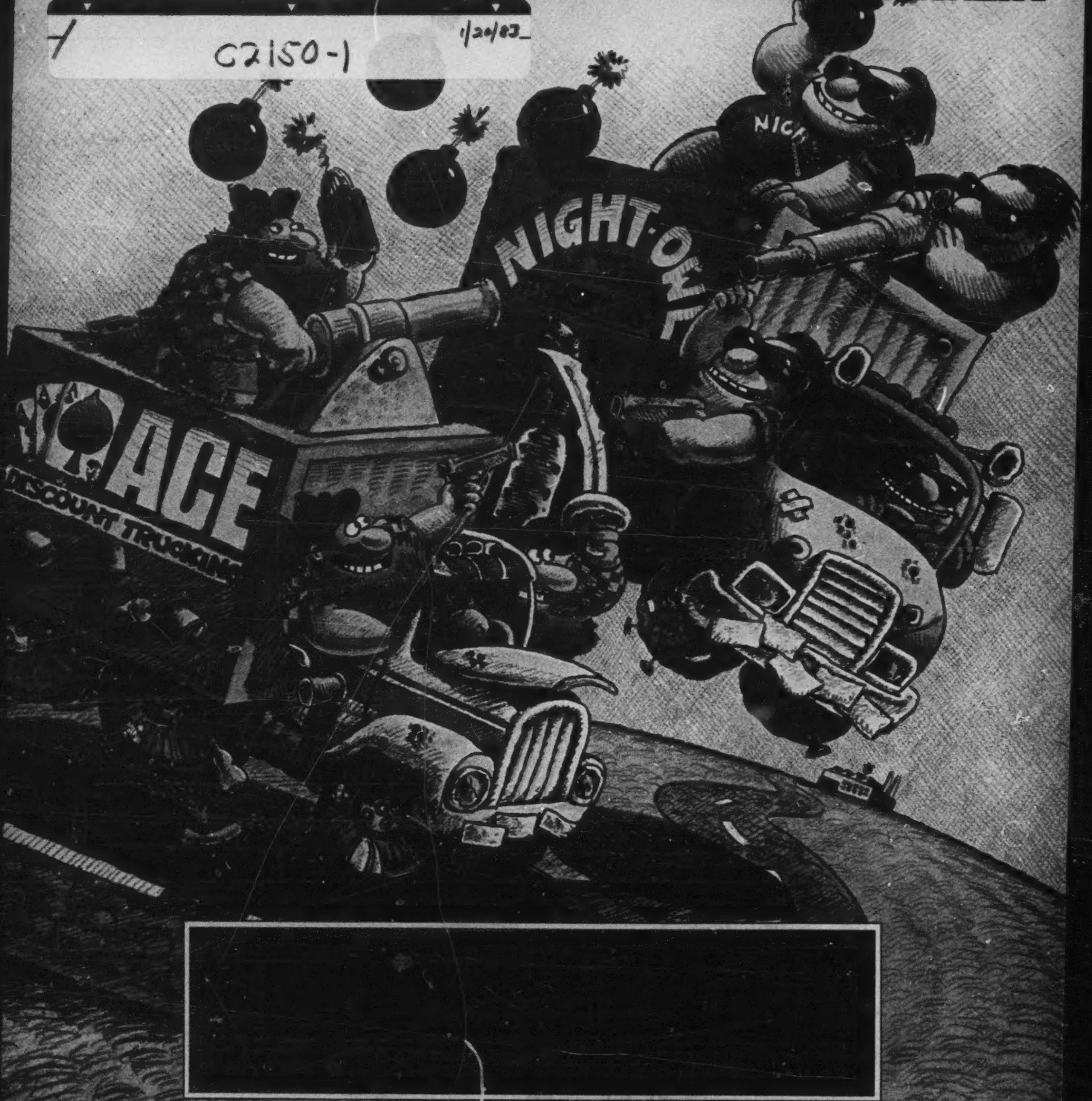
NICK
NIGHT-OWL
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DISCOUNT TRUCKING

CONSULTANT WRAP-UP • NEGOTIATING WITH RAILROADS
SHIPPERS ASSOCIATIONS: WHAT'S UP

VOLUME 81, NUMBER 11
NOVEMBER 1982

Chilton's DISTRIBUTION

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ESTABLISHED 1901 AS THE *TEAMSTER*
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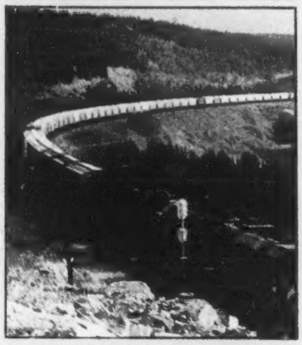

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On the Cover: *Competition between motor carriers out to capture their share of shrinking volumes of freight has been furious. Hordes of discounts have been enlisted, but no victor has yet emerged. (Artwork by Tom Barrett.)*

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FORECAST

"THE BUMPY BOTTOM"

For months now business managers have been told that the economy has bottomed out. The bottom was supposed to be reached in the late Spring, then in July, and now we are told that the bottom will come in the 4th quarter.

What puzzles economists as well as government leaders is that the economy has not responded to the normal cures of lower inflation and reduced interest rates. The so called "supply side economics" program has failed to stimulate growth and resulted in the worst economic downturn since the 1930's.

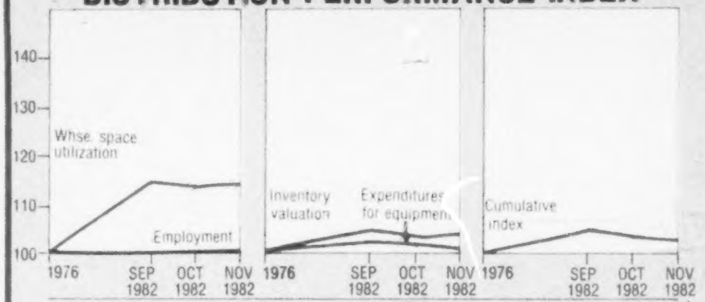
Perhaps, the most important tell-tale sign of the future of the economy is reflected in the University of Michigan's Survey of Consumer Confidence which monitors the level of promise or confidence people have in the U.S. economy. This level of confidence has been dropping each month since April, 1982. The survey reported that consumers are not about to make any significant purchases until they can be sure of the future. In reality, though, the recovery depends on the consumer and, if they have little confidence in governmental policy, the economy will not bottom out and begin to recover.

The general decline is also reflected in the drop in the Index of Leading Economic Indicators after four straight months of increases. Factory shipments are also off. In the distribution industry, which generally lags behind the economy, there was a continuing decline with warehouse space utilization decreasing from 114.9 in September to 114.3 in October, 1982. Employment continued its downward slide recording little if any change through the month of November. Inventory valuation continued to drop, reflecting the decline in the overall inflation rate. It decreased from 102.3 in September and has remained relatively constant at the 102 level through November. The current annual inflation is now below 6 percent for the year.

Spending for new equipment is also down as companies continue to pare down their capital equipment expenditures. It fell from 101.6 in September to the 101 level through October, 1982. Overall, the Cumulative Index has fallen only slightly from 103.3 in October to 103.0 in November. The Index is not far from its "bumpy bottom." Let's only hope that the national economy has reached its bottom, and isn't, as some economists predict, a marker for another round of economic woes.

Those money men warn that a healthy spurt in the Gross National Product (GNP) could cause a double-digit increase in the money supply which, in turn, would drive interest rates back up and push the prime rate to 16 or 17 percent.

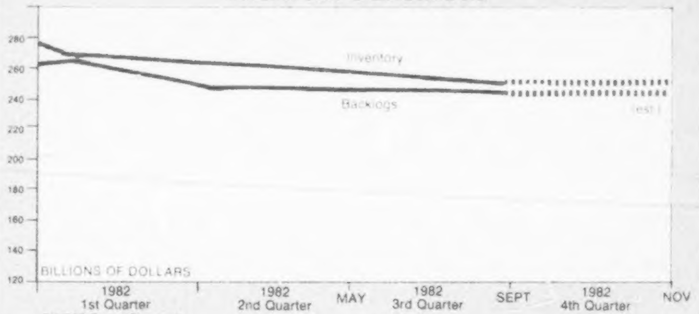
DISTRIBUTION PERFORMANCE INDEX



CATEGORY		SEP 1982	OCT 1982	NOV 1982
Whse. space utilization	100	114.9	114.3	114.9
Employment	100	100.0	100.2	100.2
Inventory valuation	100	102.3	102.0	102.5
Expenditures for equipment	100	101.3	101.0	101.6
Cumulative index	100	103.6	103.3	103.0

Table I

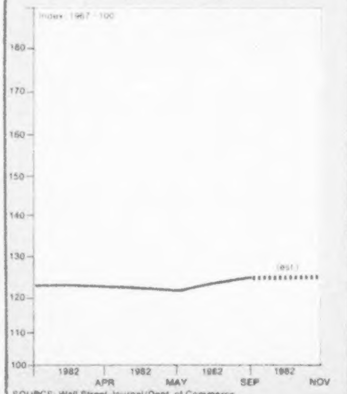
INVENTORY & BACKLOGS



SOURCE: Dept. of Commerce

Table II

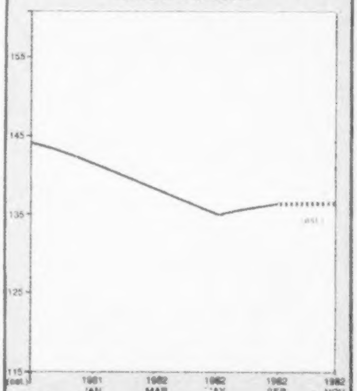
LEADING INDICATORS



SOURCE: Wall Street Journal/Dept. of Commerce

Table III

FACTORY SHIPMENTS



SOURCE: Dept. of Commerce

DISTRIBUTION CAREERS 1982

By **BERNARD J. LA LONDE, PH.D.,** Riley Professor of Marketing and Logistics,
and **RICHARD BRAND,** Research Associate, both of The Ohio State University

In each of the past eleven years, the Logistics Research Group at The Ohio State University has conducted a survey of the carrier patterns of distribution executives in U.S. firms. Originally this study sought to answer basic questions on the background, training, work experience and demographic characteristics of those executives. However, in recent years the survey has been expanded in scope to include trend analysis of the attitudes and opinions of distribution executives as well.

Specifically, the 1982 survey has sought to find answers to the following basic questions:

1. **How is the distribution function organized?**
2. **What are the primary responsibilities of the distribution executive?**
3. **Who is the distribution executive?—A Demographic Profile**
4. **How does the distribution executive perceive the future?**

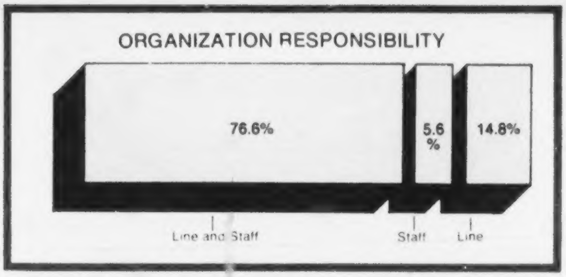
The data utilized in this study was obtained from a detailed four-page questionnaire mailed to 468 members of the National Council of Physical Distribution Management during the summer of 1982. A concerted effort was made to achieve a sample balanced on both an industry and geographic basis. In cases where two or more NCPDM members were listed within the same company, the higher ranked executive received the questionnaire. The 156 questionnaries (131 usable) which were returned represented a response rate of approximately 33 percent.

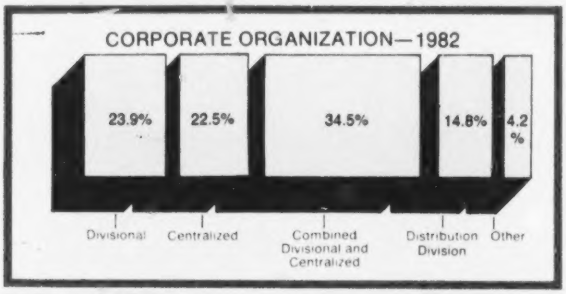
The questionnaires were coded, key punched and analyzed using the computer facilities of The Ohio State University. Tabulation of the results involved utilizing standard two-variable cross-tabulations and summary statistics, the summary results of which are reported in the body and tables of this report.

Every effort was made to classify accurately the open-ended survey responses and to interpret multiple job title classifications meaningfully. The responses to this survey indicated that a multitude of descriptive distribution job titles still exists for the key distribution executive. However, because the primary objective of this research has been to provide trend analysis of broad classifications, the authors believed it best that the analysis of the data continue to utilize the three broad managerial classifications of manager, director and vice president.

It will be noted by the reader that in the discussion and tables, comparisons are made with survey findings from earlier years. Caution should be exercised in generalizing or interpreting the results of year-to-year comparisons since the returned questionnaires are anonymous.

Continued





HOW DISTRIBUTION IS ORGANIZED

There is continued evidence of stability in the organization of the distribution function. Some 80 percent of the respondents reported both line and staff responsibility. Organizationally, 35 percent report a combined centralized and divisional organization, 24 percent divisional, 23 percent centralized and 15 percent a separate organization.

TIME EXPENDITURES ON DISTRIBUTION AND NON-DISTRIBUTION RELATED ACTIVITIES

DIRECTORS—1982

DISTRIBUTION (68%)	
Traffic	15%
Inventory	8%
Warehousing	11%
Other processing	7%
General administration	13%
Other	14%

NON-DISTRIBUTION (32%)	
Marketing	10%
Production	8%
Data processing	5%
Finance	6%
Other	3%

VICE PRESIDENTS—1982

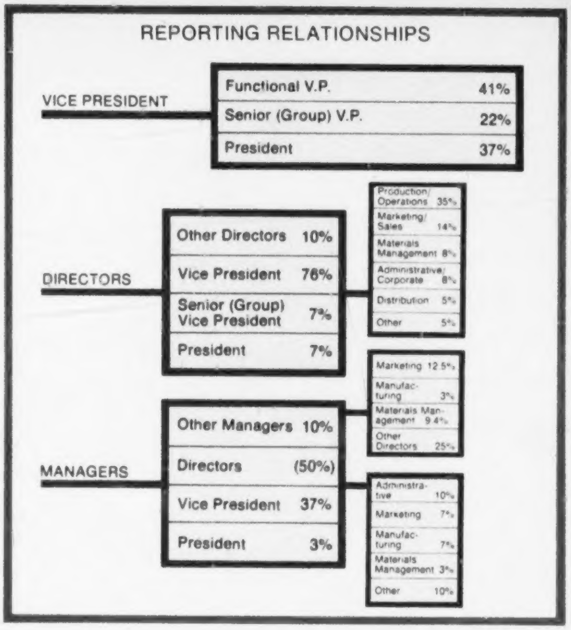
DISTRIBUTION (67%)	
Traffic	10%
Warehousing	10%
Inventory	7%
Purchasing	5%
Other processing	4%
General administration	16%
Other	15%

NON-DISTRIBUTION (33%)	
Marketing	11%
Production	6%
Data processing	5%
Finance	6%
Other	5%

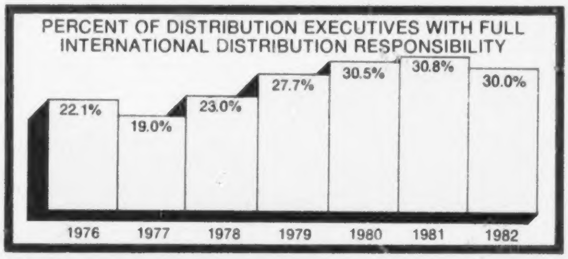
MANAGERS—1982

DISTRIBUTION (71%)	
Traffic	18%
Warehousing	14%
Inventory	6%
Other processing	5%
Plant & warehouse	5%
International	4%
General administration	9%
Other	10%

NON-DISTRIBUTION (29%)	
Marketing	10%
Production	7%
Data processing	4%
Finance	5%
Other	3%


REPORTING RELATIONSHIPS
VICE PRESIDENT
Functional V.P. 41%
Senior (Group) V.P. 22%
President 37%
DIRECTORS
Other Directors 10%
Vice President 76%
Senior (Group) Vice President 7%
President 7%
Production/ Operations 35%
Marketing/ Sales 14%
Materials Management 8%
Administrative/ Corporate 8%
Distribution 5%
Other 5%
MANAGERS
Other Managers 10%
Directors (50%)
Vice President 37%
President 3%
Marketing 12.5%
Manufacturing 3%
Materials Management 9.4%
Other Directors 25%
Administrative 10%
Marketing 7%
Manufacturing 7%
Materials Management 3%
Other 10%

There have also been shifts of patterns of organizational relationships. Our findings suggest that distribution is being linked with pre-production activities, and a new form of total material flow organization is emerging.



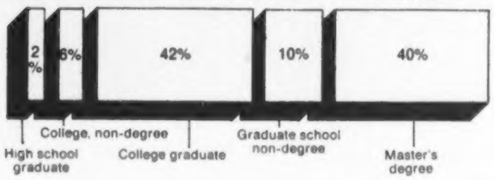
SHIFTING RESPONSIBILITIES TAKE MORE AND MORE TIME

The chart to the left breaks down where the distribution exec is spending his time. The primary trends in specific responsibilities of the distribution executives have indicated a gradual shift from a narrow traffic and warehousing responsibility to a broader range of responsibility both within and outside the distribution area.

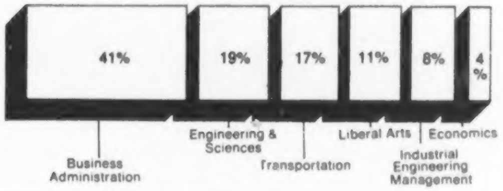
- Distribution executives spend approximately 30 percent of their time outside the distribution function. Almost two-thirds of the time spent outside of the function is spent in interacting with either the marketing or the production area.
- Directors and vice presidents spend approximately 20 percent of their total time in the transportation and warehousing areas while managers spend almost 30 percent of their time in these areas.
- The amount of time spent at all levels in "General Administration" has gradually risen over the past five years.

Continued

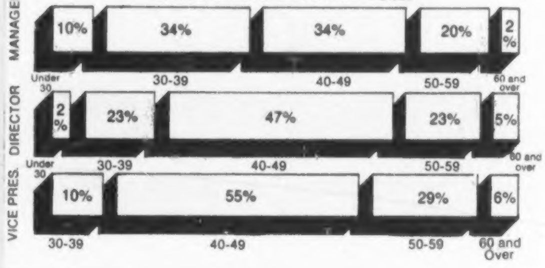
EDUCATIONAL BACKGROUND—1982



UNDERGRADUATE DEGREE MAJOR



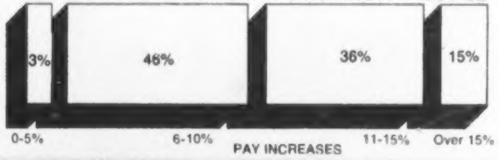
AGE DISTRIBUTION—1982



AVERAGE COMPENSATION—1982

	Manager	Director	Vice President
Top quarter	$66,200	$80,300	$111,500
Second quarter	$52,700	$61,100	$84,900
Third quarter	$42,400	$52,800	$74,200
Lowest quarter	$30,600	$42,600	$58,700
Average	$48,000	$59,200	$82,200

INCREASES IN BASE COMPENSATION—1981-82



THE DISTRIBUTION EXEC: A DEMOGRAPHIC PROFILE

The age of P.D. executives shows the same general pattern of recent years with the 40-49 age bracket continuing to dominate each job classification.

The educational profile of the distribution executive saw only random sample variations from the previous year. Emphasis is still on the college educated executive, as 98 percent of this year's respondents had some college and 92 percent had a college degree or more. Approximately half of the P.D. executives reported postgraduate work, with forty percent, reporting a master's degree or higher. Business administration, engineering and science backgrounds continue to dominate undergraduate preparations of the executives in distribution capacities.

Average compensation levels and increases in compensation levels for 1982 are also shown. Overall salary levels were substantially higher than 1981. The range of salary increases was similar to the 1981 survey level with a 12.1 percent overall increase.

EDUCATIONAL NEEDS—1982

Area	First Choice	Second Choice
Finance	28%	31%
Data Processing, Simulation, Models	16%	14%
General Management	9%	6%
Marketing	9%	5%
Legal Environment	5%	2%

What are the major factors which will influence the growth and development of the corporate distribution function during the next decade?

Factor	Most Important	2nd. Most Important
Identification and control of distribution costs	27%	19%
Ability to integrate elements of logistics system	8%	6%
Impact of deregulation	11%	12%
Utilization of computer based information systems	12%	13%
Customer Service	8%	13%
Cost of money	5%	9%

HOW DOES THE DISTRIBUTION EXECUTIVE PERCEIVE THE FUTURE?

This year, as in past years, the respondents were asked: "If you were offered an opportunity to return to school in the near future for three months and could take a custom-designed curriculum, what kinds of things would you study?" Again, as in past years, almost 30 percent of the respondents indicated a first preference for the financial area. The remaining categories were similar to the 1981 survey except that respondent interest in data processing increases sharply.

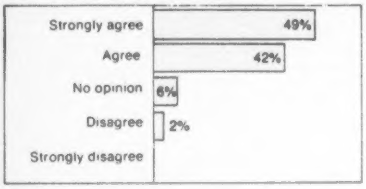
The respondents were asked to: "Identify the major factors which will influence the growth and development of the corporate distribution function during the next decade." Their summary responses are presented above. In the 1981 survey a number of significant changes occurred in the pattern of responses.

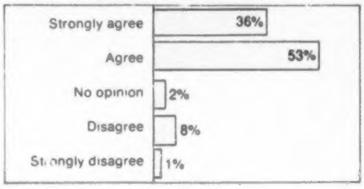
- The respondents continue to rank their ability to identify and control distribution cost as a key variable in the future of the distribution function.
- The pattern of response indicates a more global view of the distribution process in that the factors identified as significant dealt more frequently with the external environment (e.g., deregulation, cost of money, etc.).
- The respondents were more concerned with the application of MIS concepts and data processing technology to the logistics function.

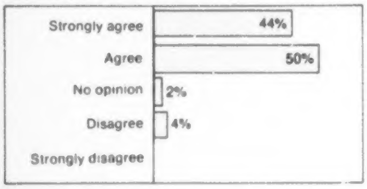
In 1981, the section dealing with respondent attitudes toward key issues in distribution was expanded. Findings include:

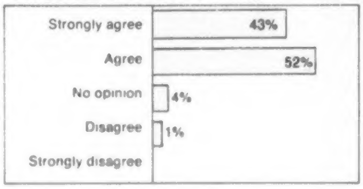
- 91% of the respondents noted that distribution is a more important corporate function than five years ago.
- 94% of the respondents agreed that more specific goals had been developed for the distribution function in their firms over the past five years.
- 91% of the respondents agreed that the computer is the key to better productivity in their firms.
- 89% of the respondents agreed that the planning process has assumed more importance in the distribution function in their firms during the past five years.
- 87% of the respondents agreed that deregulation will lower costs of transportation.

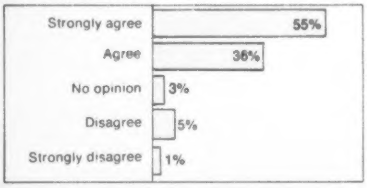
DISTRIBUTION LOOKS AT ITSELF AND ITS FUTURE

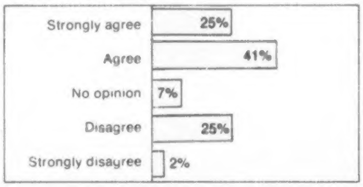

Distribution is considered a more important function in our firm than it was five years ago


The distribution planning process has assumed more importance in our firm in the operation of the distribution function during the past five years

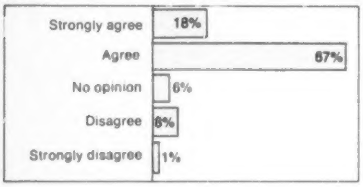

In the past five years we have developed more specific goals and standards for the operation of our distribution system

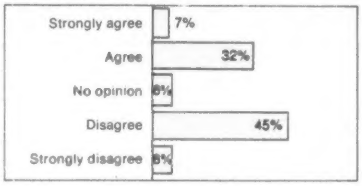

In the 1980's, more firms will use inventory carrying costing for distribution decision-making

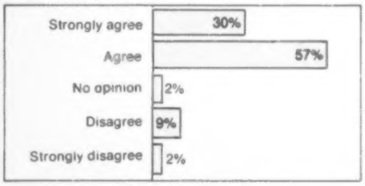

Better use of the computer is the key to improved distribution productivity in our firm

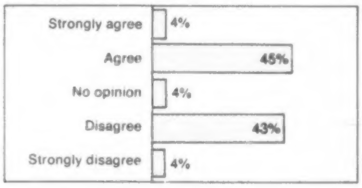

Deregulation is having a significant impact on the distribution of goods in our firm

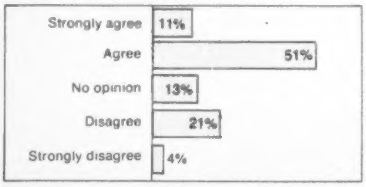
DISTRIBUTION LOOKS AT ITS PLANS AND OBJECTIVES

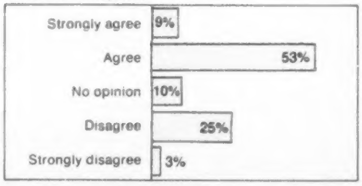

In the 1980's, most firms will maintain higher customer service levels for key accounts than for other customers


Given the current and forecasted economic climate, we will use more private carriage capability in the period 1981-86


Deregulation of the transportation system will lower costs of transportation


In the face of sharply increased costs, customer service levels will be lowered by most business firms in the 1980's


Given the current and forecasted economic climate, we will use more public warehousing to meet any expanded storage needs in the period 1981-86


Deregulation will improve service levels in the U.S. transportation system

STUDY IMPLICATIONS

Since the study has been conducted annually for the past eleven years it might be appropriate to identify the primary changes which have occurred in the distribution function over the past decade. Again, caution should be exercised in interpreting these trends due to the unique character of the distribution function in many firms and year-to-year shifts in the same base.

Positioning of the P.D. function:

- Over the past ten years there has been a shift from position the distribution function as a staff function to a line function or combination staff/line function.
- The number of V.P. level respondents has more than doubled since the early 1970's. Director level respondents have increased by over 64 percent.

Primary responsibility of the distribution executive:

- In the early 1970's the typical distribution executive was largely concerned with a narrow range of activity—usually transportation and warehousing. By the early 1980's the P.D. function had been broadened to include activities ranging from forecasting to order processing.
- A corollary to the broadening of the P.D. function has been an "outer directed" focus. That is, the distribution executive of the 1980's is spending a signficantly larger share of the day interacting with the marketing, production, finance and data processing.

Future directions:

- During the past several years there has been a steady trend toward more "scientific" distribution. This trend has been demonstrated in a number of different ways including a concern for planning, an increased interest in the technology of distribution and a broadened base of involvement in more technical aspects of the corporate mission.
- Beginning in the later part of the 1970's and continuing strongly in the 1980's is a trend toward more involvement for the distribution executive in operational and strategic planning.
- There is mounting evidence that change in the distribution/logistics function is occurring more rapidly.
- There is some evidence in the past few years that some fundamental changes in organizational structure are occurring in a significant number of firms. The evidence suggests that reorganization is in terms of functional integration of the total material flow.

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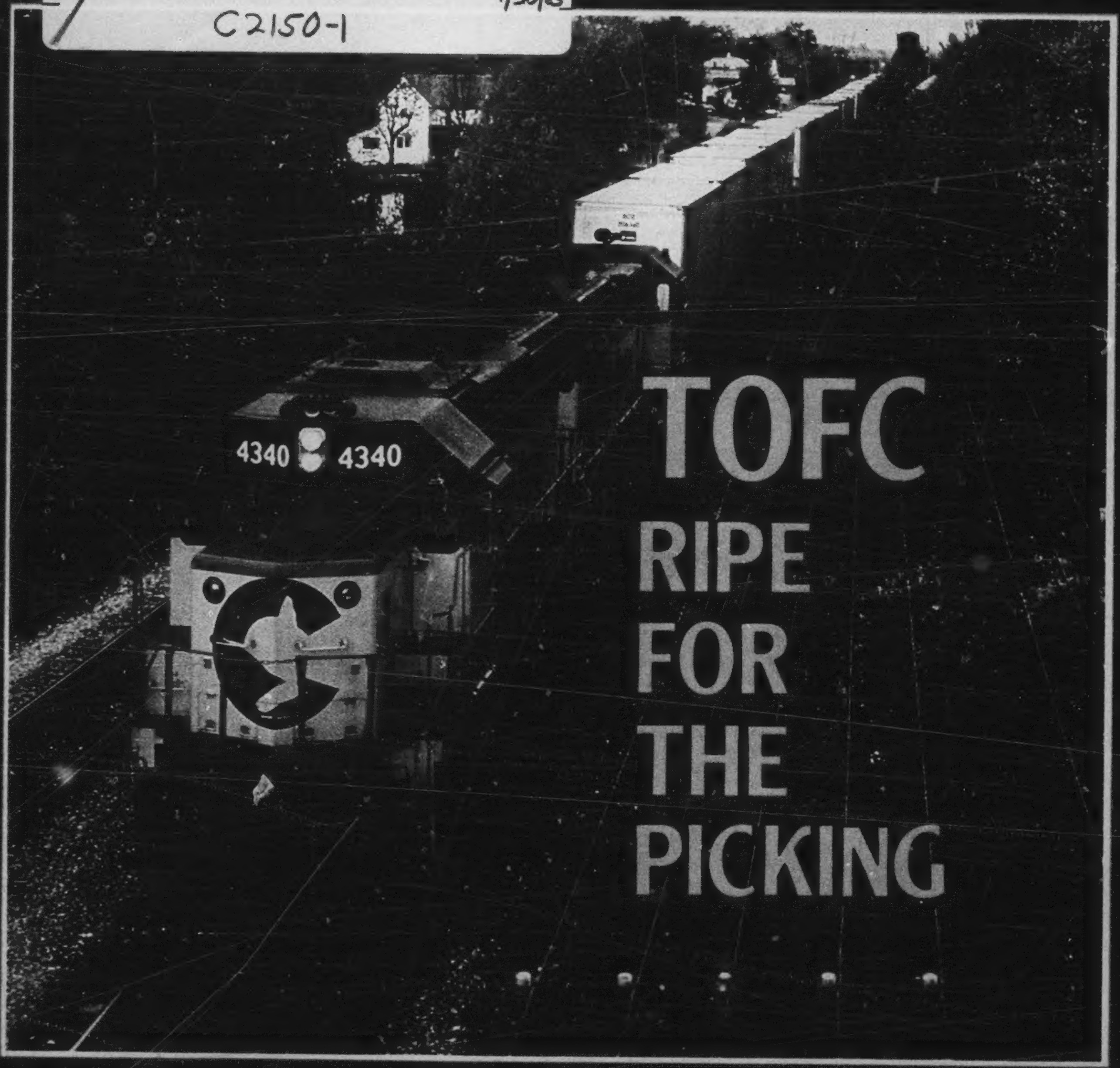

TOFC RIPE FOR THE PICKING

OCEAN CARRIERS PLOT A NEW COURSE
GETTING DOWN TO BUSINESS AT FTMs
3RD ANNUAL DAMAGED DELIVERIES
COMPLETE 1982 DISTRIBUTION INDEX

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FEATURES

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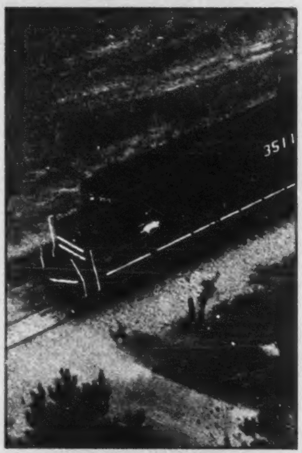

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On the cover: During the ongoing surge in TOFC traffic, shippers are riding the rails to profits and service that were not possible in years past. Photo supplied by Chessie System Railroads.

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JESSE H. NEAL

FORECAST

'IS THERE LIGHT AT THE END OF THE TUNNEL?'

As the end of 1982 nears many distribution managers will be glad to see it go. Unemployment reached an all time high and inflation reached an all time low. Government forecasts of improvement proved to be wrong six times during the year and interest rates remained high throughout the first half. At the recent meeting NCPDM in San Francisco most distribution managers were gloomy about the future and some were wondering whether they would be employed in the near term.

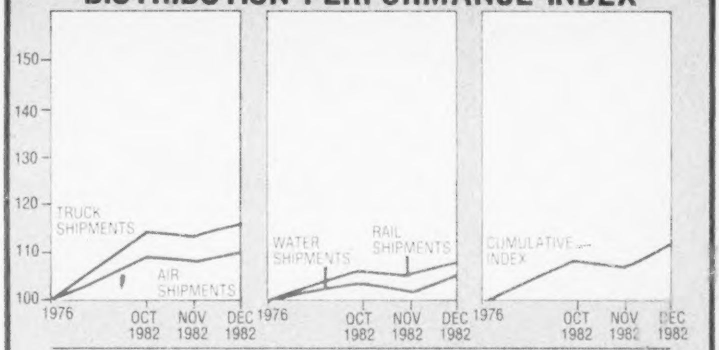
Despite all of this gloom the stock market began to spring to life in the late Fall, reaching all time record heights and, as we approach the end of the year, it appears that the signs of recovery are beginning to manifest themselves.

Interest rates have moderated considerably since the end of September and will end the year averaging about 12%. The inflation rate has dropped considerably and will average about 5 percent at the end of 1982. The index of leading economic indicators showed a brief upturn in October and November and factory purchases of new equipment are also up from the same period last year. In addition new housing starts are up 23 percent over 1981. What this all means is that a recovery is about to begin.

The upturn is beginning to show itself in the distribution sector of the economy with shippers reporting a small increase in truck shipments from a level of 112.1 in November to 114.2 in December. A similar trend is detected in the air industry with shipments rising from a level of 108.3 to 110.6 in December.

Water shipments are also expected to increase from 105.3 in November to 107.4 in December, 1982. Rail shipments should rise as well, from 103.2 to 105.9 by years end. Overall the cumulative index reports an increase to 111.1 through December. So while *gloom* and *doom* were the feelings in the distribution industry a few short months ago, there is light at the end of the long dark economic tunnel.

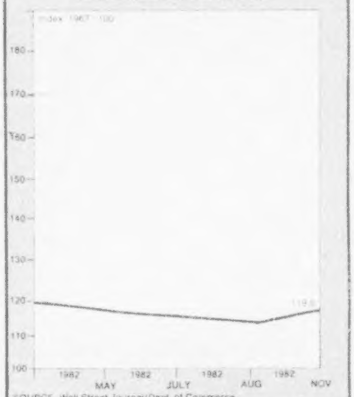
DISTRIBUTION PERFORMANCE INDEX



CATEGORY	1976	OCT 1982	NOV 1982	DEC 1982
Truck shipments	100	113.7	112.1	114.2
Air shipments	100	109.6	108.3	110.6
Water shipments	100	106.6	105.3	107.4
Rail shipments	100	104.1	103.2	105.9
Cumulative index	100	109.3	108.0	111.1

Table II

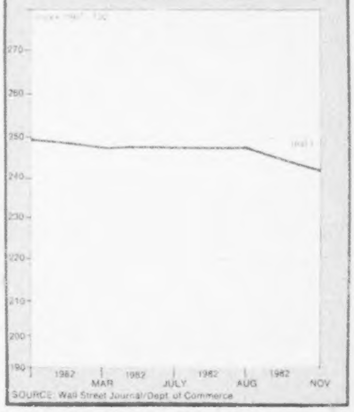
LEADING INDICATORS



SOURCE: Wall Street Journal/Dept. of Commerce

Table III

CONSUMER PRICES

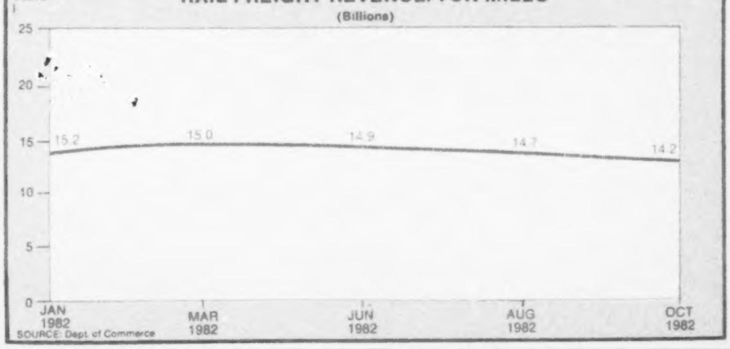


SOURCE: Wall Street Journal/Dept. of Commerce

Table I

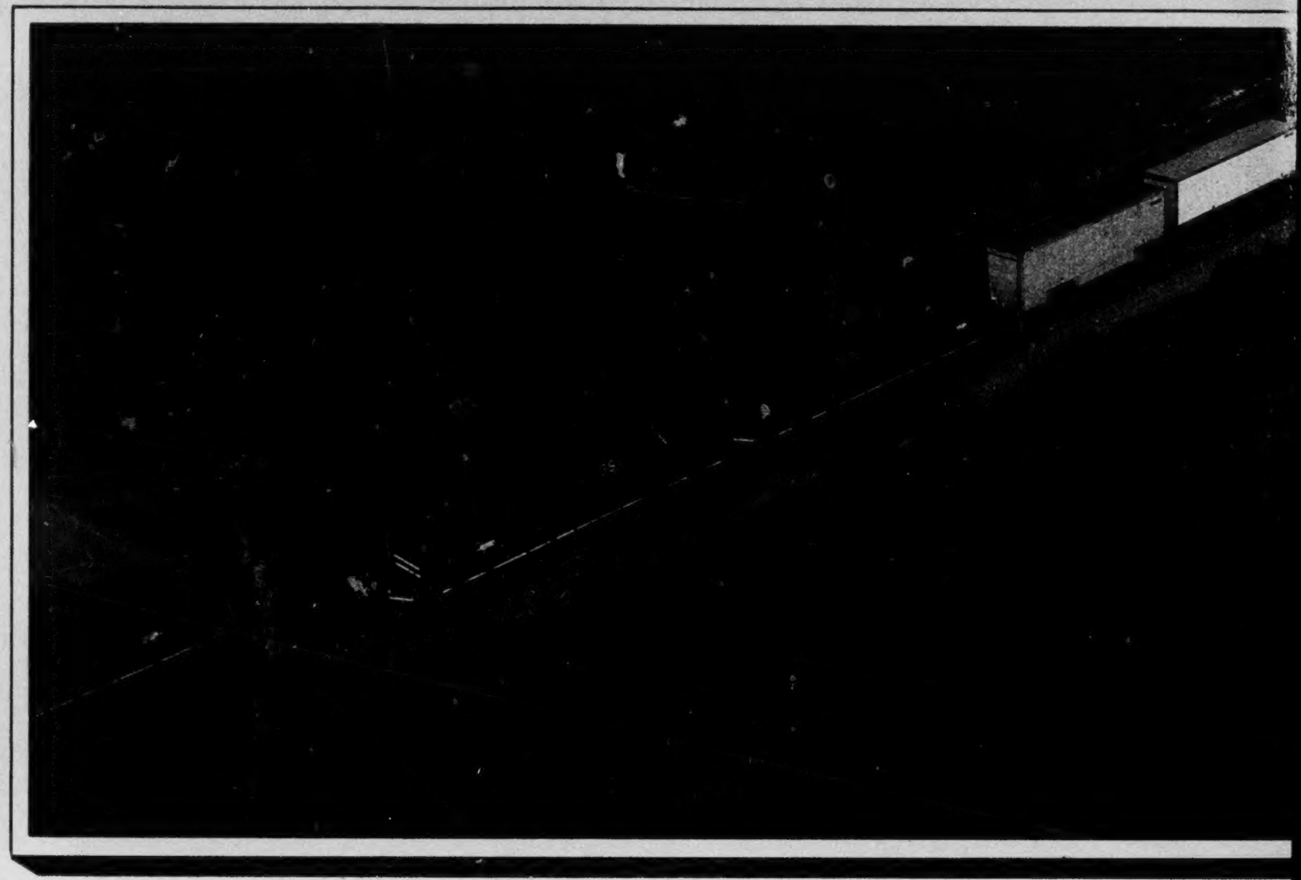
RAIL FREIGHT REVENUE/TON MILES

(Billions)



SOURCE: Dept. of Commerce

A major part of that light is a belief that the Federal Reserve Board will cut the interest rate on federal funds—the cash reserves which banks lend each other. Many economists see further recovery hinging on those declines, but there are also money-men who argue that a rapid growth in the money supply will rekindle inflation. Whatever the case, there haven't been any indications of what the Fed will do. □



They are out there—better than 5000 of them. Trailers with strange new names riding TOFC coast-to-coast. Their bloodline can be traced to deregulation, yet, they predate the Staggers Act.

AXXA, CO-OP, MARTRAC, BRAE, IMEX, PSAZ, definitely not members of the well known freight forwarder fraternity that includes Universal/Pioneer, Merchant/Stor Dor, Clipper Express or a long line of others. Nor are they the names of large shipper agents.

Perishable Plan III operators—as they are known in the industry—are primarily unregulated agricultural forwarders. They provide refrigerated trailers and door to door, single through bill of lading service to perishable shippers, receivers and grocery chains.

Leaving agricultural areas in Arizona, California, Florida, Oregon and Washington, their primary markets include Chicago, Boston, New York City, New Jersey, Philadelphia and the major Ohio River Valley cities. They carry lettuce, avocados, cauliflower, limes, cherries, apples, pears and other produce.

These Plan III operators sell their service two ways: By contract or on the spot market. Under contract, these operators will agree to make available a given number of trailers per week or month. The shipper/receiver agrees to use at least that many trailers per week or month.

The rate charged per trailer (per origin and destination) may be fixed at an annual rate, vary per shipping season or vary monthly. Contract lengths can stretch from one to seven years, but most are for one or two years.

In the spot market, these operators quote a daily trailer rate (per origin and destination) based on shipping needs, the availability of equipment and competitive rates. In this foot race, the operator looks for the highest rate and the shipper shops for the lowest, hoping that the available trailers haven't been snapped up before he makes up his mind.

Rates in this market can take drastic swings over a week or even a few days, and seasonal price swings are sharp. Weather conditions, holidays, rates in other geographic growing areas, the ability to get a profitable return load or, sometimes, just a quick return load, all affect rates. For example, summer rates for lettuce last year topped $4200 per trailer from California to New York. The winter rates fell to the $2000 per trailer level for the same lane.

Whatever the rate, though, the operator maintains the equipment, pretrips the trailer, dispatches it to the shipper and pays for drayage for rubber tire interchange between rail connections and also at destination. The trailer is tracked from loading to unloading and customer notification is provided as necessary or requested. The operator also arranges for and pays for the railroad line haul.

The majority of this traffic moves on annual volume contracts at favorable rail rates. The railroads, however, require that these operators balance each low rate perishable move with a high rated dry move in the reverse (usually headhaul) direction.

Because of the high rate trailer balance requirements in their rail contracts, the operators' ability to control the dry moves is critical not only to trailer utilization but to profitability. Several operators contract with major freight forwarders, shipper agents or shipper associations to reload and return the equipment westbound. Others

The spurt in TOFC continues, and a big part of that can be linked to forwarders who have set their sights on something we do every day – eat.

by DENIS DAVIS, Senior Associate Editor

TOFC RIPE FOR THE PICKING

move the trailers westbound themselves or with sister shipper associations. And still others control the dry freight balance with their own freight forwarder, shipper agent or motor carrier operations. Plainly, some of these operators have parents that are already well established in the dry freight business. For example, AXXA (Agricultural Express of America) is under common ownership with the major freight forwarder Clipper Exxpress. Fresh Approach Transport Company, while privately held, is managed by Riley Whittle, Inc., a transportation broker.

Intermodal Express is privately held and also operates a shipper agent and motor carrier operation. Intermodal Systems is owned by Leaseway Transportation which operates Midwest Distribution, a new LTL operation, several contract carriers and leases trailers (for a complete list of the operators and their affiliations see the list on p. 37).

The trailer fleets of these Plan III perishable operators have grown from 1000 trailers in 1980 to 5800 trailers at the beginning of the 1982 summer shipping season. This year, they should account for 75,000 to 80,000 trailer loads of perishable traffic, and their trailers will participate in an equal number of dry freight moves.

Where did these operators come from? From deregulation, the deregulation of fresh fruit and vegetables.

In 1979, the railroads complained to the ICC that they could not compete with unregulated motor carriers moving fresh produce from the West to eastern markets.

The commission, facing problems with independent truckers disrupting the movement of produce because they were dissatisfied with fuel costs, saw railroads as a way around the problem. The ICC exempted the movement of perishables from regulation, hoping to break the grip of the unregulated truckers.

Many railroads, particularly western roads, jumped into the market with a vengeance and captured enormous amounts of produce from the truckers. When the ICC flung open the deregulation door, neither the railroads nor the produce growers lost any time in hammering out TOFC arrangements.

According to Dr. Paul Roberts, a principal with Booz, Allen & Hamilton and an intermodal specialist, deregulation took the costs of empty backhauls and collapsed them. In addition, the long hauls, big flows and empty backhauls made perishables a good entry point for the railroads. Finally, it was a huge market—dominated by truckers and the headhaul was going in the right direction (west to east). The railroads jumped in, but they allowed outside parties to own the trailers, ever mindful of the expense of owning and operating reefer equipment.

Transamerica, Inc., a major insurance company and trailer lessor, took a hard look at the market and waited until 1981 to enter. But now that they have been in the water for about 18 months, they like its feel.

"We see this marketplace as getting ready to settle out," explains David Wright, executive vice president, Transamerica Distribution Services. "One small company has already gone bankrupt, and we expect that several others will not survive. We, and several others, have big corporations behind us, meaning that we have staying power, and we see this as a good long-term market. However, many operators come

continued

TOFC

in with stars in their eyes, seeing big bucks, and then find that it is a tough, thoroughly competitive market."

Wright believes that the crux of the Perishable Plan III industry is very tight asset management. "We are talking about over $3 million per 100 pieces of equipment. The success or failure of your operation hinges on turning your equipment around," he says.

To do that, he points out, there are a lot of different players in the ballgame. There are, for example, people who use Plan III only for backhauls. UPS is a classic example. There are co-ops and there are private, for-hire companies, some having their own backhauls like National Piggyback.

About his own company, Wright says: "We sell our backhauls to major shipper agents, shippers, freight forwarders, associations, etc. We provide a portion of their equipment, but because of their volume, there isn't enough equipment in the Plan III business to handle it all, so these middlemen use a great deal of rail owned and leased equipment."

As for the Perishable Plan III operator's equipment, it follows the growing season from Arizona and Southern California to Northern California and the Pacific Northwest. In the east, their equipment is positioned according to the growing season.

The need for speed also means that these operators pick their routes to the East very carefully. Says Transamerica's Wright, "When running from California to Boston, for example, we bring that traffic into Chicago via the Santa Fe, take it crosstown to the Conrail yard by truck, and move it to Boston via Conrail because it does an excellent job on that route. But to some cities, to Cleveland, for example, we bring that shipment into Chicago by rail, then truck it."

According to Wright, Transamerica Distribution is selling dependability. In fact, he stresses dependability. "When we promise a trailer on Thursday, it will be there. Or if it can't, that shipper knows about it immediately and we work something else out."

Wright says that Transamerica's rates are not significantly lower than truckers', but adds that transit times to Chicago are competitive, although about one day slower to the East Coast than trucks. But with such time sensitive commodities, sometimes, that one day is too much.

"If you're in a strong market," explains Tony Alegria, "a market where the potential is for the price to remain the same or get better, then piggybacking is tremendous. An extra day or two in transit doesn't alarm anybody."

"But," cautions Alegria, traffic manager for Snokist Growers in Washington State, "in a downward market, those extra days will make a big difference. In fact, buyers prefer to pay the extra cost of truck, get their product to market, and not have to worry about the price dropping over that day or two."

Alegria says that as a rule of thumb, Snokist looks at trucks going across the country in about four days and piggyback in six.

Perishability is another big concern. Alegria notes that commodities like strawberries and cherries are expensive by the pound. Buyers pay a lot of money for them and perishability is a big factor. Time, then, becomes critical, and trucks provide faster transit times.

For their Plan III moves, Snokist uses several carriers. And Alegria says that by using Plan III, Snokist's customers receive the freight on a fast, more reliable operation than the railroads had several years ago. He chalks that up to scheduling incentives, pointing out that the railroads are more prompt in

continued

HOW ABOUT THE REST?

Without a doubt, perishables make up an important part of today's TOFC market, but it is certainly not the whole thing. To get an overview of piggyback today, we talked with Dr. Paul Roberts and Hugh Randall of the consulting firm of Booz, Allen & Hamilton. Both men are considered experts on intermodal transportation.

To start, DISTRIBUTION asked about the role of middlemen (agents, associations, co-ops and forwarders). According to Dr. Roberts, their role will continue to grow as TOFC continues to grow. He cited a report by the Association of American Railroads (AAR) that last year the amount of traffic handled by these middlemen—including mixed freight—rose from 40 to 80 percent.

Dr. Roberts saw two major reasons for it: first, they provide a full line of services (as an example, he mentioned perishable Plan III operators) including equipment that is in good shape, long or short term leases, good rates, pickup and delivery and through rates.

And second, he sees them eliminating what he calls the inter-railroad coordination problem. What that means is that a California based railroad isn't in the position to arrange a backhaul from New Jersey, but these middlemen are. They are nationwide in scope.

Here Randall added that as these middlemen get bigger, they will have more leverage and bargain even harder for what they want from the railroads—bargain for everything—including rates. He speculates that because of this penetration, rail margins will decline and the carriers will consider returning to acquiring loads directly from shippers, handling to destination, arranging backhauls and providing equipment.

On the potential for continued growth of TOFC, Randall says there is an important and often overlooked point to take into consideration. "Intercity truck traffic is huge compared to piggyback traffic; so the room for growth is enormous if you can get piggyback traffic assembled. In addition, if you can double, triple or quadruple your piggyback traffic, it makes itself worthwhile by reducing your fixed costs at destination. And finally, deregulation has opened the size of the area that can be fed into TOFC by truck. "You don't need as long a haul to reach the break even point," says Randall. "And because of that, we may see concerted efforts in some corridors to bring traffic to TOFC because its economy of scale can bring down some of the fixed costs."

When asked about more and more regional carriers turning to TOFC, Roberts noted that many of these carriers are fighting hard to retain traffic because the major truck lines are expanding their terminal networks and encroaching on territories and traffic that they formerly interlined with these regional carriers. To survive and drum up business in other markets, these smaller carriers are taking on partners (other small carriers) in distant markets and using TOFC as the link.

PERISHABLE PLAN III OPERATORS

OPERATOR	FLEET SIZE	CORPORATE AFFILIATION
AXXA (Agricultural Express of America)	198	Under common ownership with Clipper Exxpress
Agrishare	100	Agricultural cooperative
CO-OP (Co-operative shippers Association	387	Shippers cooperative
Cornucopia Transportation, Inc.	800	Independent
Fresh Approach Transport Company	100	Independent
Gelco Rail Services	900	Gelco Corporation (Trailer lessor)
Intermodal Express, Inc. (IMEX)	280	Independent
Intermodal Systems, Inc.	300	Leaseway Transportation (Motor carriage, trailer lessor)
Lomax Consolidators	70	Independent
Martrac	700	United Parcel Service
National Piggyback Services	603	BREA Corporation (Operates shipper agent, trailer lessor)
PSAZ (Pacific Northwest Shippers Association)	351	Shippers association
Rail Services, Inc.	229	Independent
TRANFAX	100	Independent
Transamerica Distribution Services	400	Transamerica, Inc. (Trailer lessor)
U.S. Intermodal Distribution	200	Transcon, Inc. (Motor carrier)

TOFC

the movement of piggyback trains.

On cost, Alegria says the cost factor is by box, and it says: When you are putting so many boxes into a container or trailer, it will cost so much per piece. Fruit and vegetable growers look at that cost per piece and find it less by piggyback.

"Of course," he says, "all things being equal, I'm talking about being able to take an extra day or two to reach a destination and getting a better cost."

On savings, Alegria couldn't be specific because each association has a different rate structure. But he says he does know that Snokist can save money with Plan III.

Deregulation has also affected Snokist's other rail operations. Alegria explains that the Pacific Northwest Shipper Association (PSAZ) and a number of other shipper groups made contracts with the railroads for volume movements. He says that Snokist is utilizing that for dry freight because the transit time isn't a big factor. In addition, last year, Snokist started to ship canned, processed fruit in rail owned trailers.

"What this has done," Alegria says, "is open up new markets for us, because the transportation savings have allowed us to become competitive. And with this expansion into new markets, we certainly would like to see piggyback continue to develop."

Most prognosticators of the railroads' future see just that, a continued growth in piggyback service. Consider that after coal, piggyback traffic accounted for the most carloadings last year. In 1981, piggyback traffic was up three percent over 1980. Also consider that, historically, in recessionary periods, piggyback traffic declined faster than other rail traffic. Since deregulation, it has grown in the current recession. And according to the Association of American Railroads, the area for the most growth in piggyback has been perishables.

Since 1979, the cost of owning and maintaining reefer trailers kept the railroads away from door to door service for perishables; that is no longer the case.

The Seaboard Coast Line's new "Orange Blossom Express" will move fresh fruit and vegetables from Florida to the Northeast—door to door—on rail controlled equipment.

Produce will be loaded on 45-ft. trailers in Florida's growing areas, trucked to Orlando, loaded onto a dedicated train for an overnight trip to Wilmington, Del., and then be trucked throughout the Northeast.

According to the SCL, this six day a week service will use a single through bill of lading, and the rates will be competitive with truck rates.

Rail costs? As always, backhauls will grease the rails that the low rated produce will move on. And a spokesman for SCL predicts that existing traffic and new traffic will jump on board.

While SCL sees a bright future for its new operation, at least one perishable Plan III operator pooh-poohed further encroachment by the railroads.

When asked if middlemen's leverage with the railroads will be used to bargain for everything—including rates, and because of that, cut into railroad margins and force them into acquiring loads directly from customers, this operator said no.

He pointed out that in most cases a railroad's sales force isn't in place at destination and railroads aren't geared toward this kind of business.

SCL's spokesman admits that his road had preferred Plan III for some time, but he says: "We now see that traffic is there, with the freedom of the Staggers Act and with this fast dedicated train on a fast schedule, we believe the business is there for us and we are positioning ourselves to handle it."

What, if anything, the SCL's new service portends for middlemen, their growth continues to be one of the major benefits of deregulation. Standing between shippers and carriers, they can quote rates—door to door, and they can provide equipment, service and accountability for an entire move. In addition, the growing volumes of traffic they handle through brokering, consolidating and mixing, promises lower costs and better service for all TOFC shippers. ■

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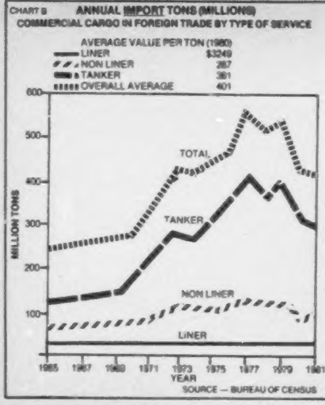

Correction: In our October article, "Anatomy of an Import" we incorrectly labeled the trend lines on the chart at the bottom of page 75. This chart corrects the error.

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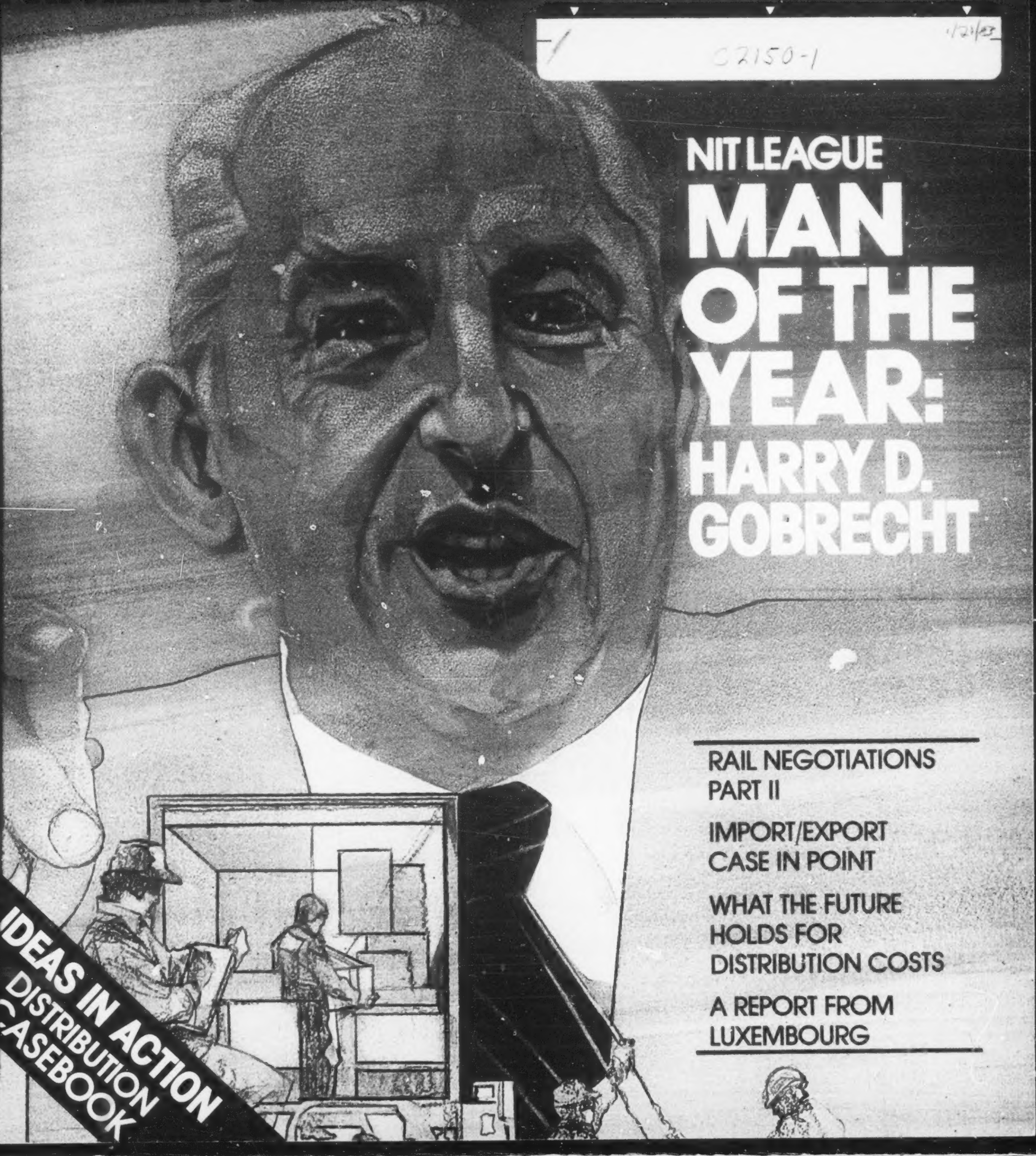

NIT LEAGUE MAN OF THE YEAR: HARRY D. GOBRECHT

RAIL NEGOTIATIONS PART II

IMPORT/EXPORT CASE IN POINT

WHAT THE FUTURE HOLDS FOR DISTRIBUTION COSTS

A REPORT FROM LUXEMBOURG

IDEAS IN ACTION
DISTRIBUTION CASEBOOK

VOLUME 82, NUMBER 1

JANUARY 1983

Chilton's DISTRIBUTION

FREDERICK A. STANLEY, PUBLISHER
ESTABLISHED 1901 AS THE *TEAMSTER*
CLIFF MITCHELL, CIRCULATION MANAGER

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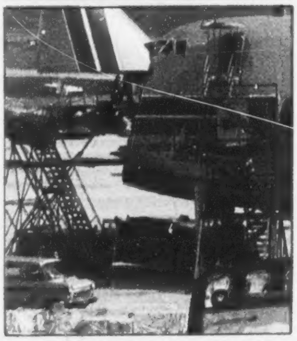

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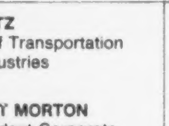


FORECAST

1983—A WHOLE NEW BALL GAME

For the beginning of 1983 the Distribution Index will be changing its format in order to make it more useful for shippers in their planning. Each month the index will report the *Key Industry Indicators*, which reflect economic activity in the important industries. This data is important to distribution managers in that they will be able to use it as a guide for what will happen in their own companies and industries.

In addition the index will list the *Forecast Indicators* which are derived from the *Distribution Index* company panel. In short, the updated index will provide current as well as monthly forecasts of distribution activity.

In successive issues, DISTRIBUTION will add to the indices and indicators according to needs expressed by readers.

For January, 1983, the economic picture facing the distribution industry looks mixed. Believers in the stock market would hold that there is prosperity around the corner. Those who are proponents of monetary policy will forecast a slow recovery. Indeed the signs are beginning to look positive with the Index of Leading Economic Indicators rising 1.6% in December, 1982 and forecast to increase by 8/10's of one percent in January.

In the distribution industry, the effects of the mild economic upturn are beginning to expand slowly from 115.3 in January, 1983 to a forecasted level of 116.1 in February, 1983. Rail shipments will rise slowly from 106.1 in January to 106.2 in February, 1983. Water shipments will also rise slowly during the early part of the year to a level of 107.8 through February.

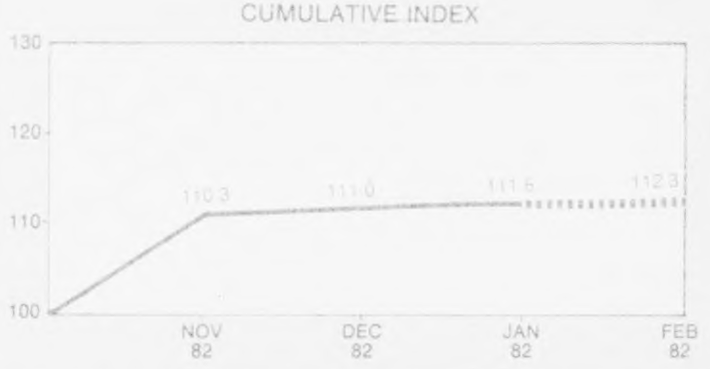
A key indicator of economic performance for the distribution industry is the amount of inventory in warehouses. For the early part of 1983 warehouse space utilization is expected to decline mildly to 112.2 from a level of 112.7 in January and from a high of 114.9 in November, 1982. Along with this will be a further moderation of inflation as reflected in the drop in inventory valuation from 103.6 in January to 102.1 in February. The increase in economic activity in the first part of 1983 will make the economic picture for the "year look like a whole new ball game." ☐

KEY INDUSTRY INDICATORS— Nov. 13-Dec. 13, 1982

Raw Steel Production:	447 (1000 net tons)
Auto Production:	419,989 units
Truck Production:	128,524 units
Bituminous Coal Production:	64204 (1000 net tons)
Paperboard Production:	2318.8 (1000 of net tons)
Lumber Production:	12087 (1000 of net tons)
Rail Freight Traffic:	61.2 billions of ton miles

DISTRIBUTION INDEX FORECAST INDICATORS

	Nov/82	Dec/82	Jan/83	Feb/83
Truck Shipments:	112.1	114.2	115.3	116.1
Rail Shipments:	103.2	105.9	106.1	106.2
Air Shipments:	108.3	110.6	111.1	111.9
Water Shipments:	105.3	107.4	107.5	107.8
Whse Space Utilization:	114.9	113.7	112.7	112.2
Inventory Valuation:	102.0	103.0	103.6	102.1
Cumulative:	110.3	111.0	111.6	112.3



What economic indicators do you use for your forecasting? DISTRIBUTION would like to track the indicators you think are most useful. A number of readers have already sent in some good ideas.

One consumer goods shipper tells us he thinks sales of fiberboard is a great distribution indicator. "You can't ship it or sell it without a cardboard box," he says.

Another machinery shipper tells us scrap metal prices are the best leading indictor of industrial demand. "When scrap prices start to climb, capital spending is going to take off," said this shipper, "We need to know when the market is going to turn around to make our transportation plans."

You probably have an indicator you think is important for your distribution and transportation planning. Tell us what it is, and DISTRIBUTION will try to include it in our monthly *Forecast* column.

Send them to: The Editor, DISTRIBUTION Magazine, Chilton Way, Radnor, PA 19089

TRUCKING

JEAN V. STRICKLAND

"TOTO" PALES BY COMPARISON

Decisions in the last two years allowing private carriers to provide compensated transportation for wholly-owned subsidiaries and to obtain "Toto" operating authority were very significant. But, according to some experts, the importance of these freedoms pales in comparison to the Interstate Commerce Commission's most recent decision affecting private truckers. In that decision, MC-43 (sub 12), the ICC modified its leasing regulations to permit private carriers to trip-lease their equipment to regulated trucking firms. Previously, lease arrangements between private and for-hire truckers had to be for a minimum period of 30 days.

The impact of this change is greater than that of previous reforms because virtually every private carrier can easily take advantage of trip-leasing to reduce empty miles. "This is the hottest thing that has yet come along for private carriers," according to Vincent O'Donnell. O'Donnell, who is head of American Trucking Associations' Private Carrier Conference, which originally asked the ICC to approve trip-leasing, added, "most of our members view it as the most important change that has or will take place."

Richard Henderson, executive director of the Private Truck Council of America, agrees. "I don't believe we will see anything come out of Congress of the Commission that will be more important than this decision," he said.

Henderson explained that many private carriers have not taken advantage of other reforms because of built-in restrictions. Intercorporate hauling is available only to shippers with wholly-owned subsidiaries and can be used successfully only when the companies involved have compatible transportation needs and just the right distribution configurations. And most private truckers have not felt comfortable applying for ICC authority simply because they prefer to remain unregulated. None of these restrictions apply in the area of trip-leasing.

Even private carriers that have used intercorporate hauling extensively are looking forward to greater efficiencies under the new rul-

continued

HIGHWAY TAX PROPOSAL: UNFAIR TO HEAVY TRUCKS?

Details of the Reagan Administration's proposal to increase highway user fees have been hammered out, and predictibly, not everyone is smiling. While the American Trucking Associations, Inc. (ATA) favors a general tax increase, the heavy vehicle user fee, ATA maintains, is disproportionate to the other fees and increases being proposed.

"It is incredible that (the Department of Transportation) could be seriously proposing these tax increases under the circumstances. It is even more incredible that they are proposing them at a time when the trucking industry is reeling financially from the dual effects of the economic recession and the disruptions caused by deregulation," said an ATA spokesman.

The special user fees applicable to heavy equipment represent a 182 percent increase in current fees paid by 5-axle tractor semitrailers.

User Fee Type	Current Rate	Proposed Rate
Gasoline	4¢/gallon	9¢/gallon
Diesel	4¢/gallon	9¢/gallon
Tires	9.75¢/pound, all tires	25¢/pound only for tires weighing more than 100 pounds
Tread Rubber	5¢/pound	25¢/pound
Truck Parts	8 percent, all trucks	12 percent only on parts for trucks 33,000 pounds GVW
Truck Sales	10 percent, for trucks 10,000 pounds GVW	12 percent only on trucks 33,000 pounds GVW
Heavy Vehicle Use Fee	$3/1,000 pounds GVW for trucks 26,000 pounds GVW	For trucks 55,000 to 70,000 pounds GVW: $100 + $6/100 pounds in excess of 55,000 pounds. For trucks 70,000 to 80,000 pounds GVS: $1,000 + $17/100 pounds in excess of 70,000 pounds. For trucks 80,000 pounds GVW and above: $2,700.

	5-Axle Tractor Semitrailer		
User Fee Type (Special)	Current	Proposed	Increase
Heavy Use	$ 210	$2,360	$2,150
Excise	757	908	151
Tire	99	119	20
Retread Rubber	29	147	118
Inner Tubes	11	—	(11)
Parts & Accessories	48	73	25
Lubricating Oil	9	—	(9)
TOTAL (Special)	$1,163	$3,607	$2,444
% Increase			210%
Fuel	$ 583	$1,312	$ 729
TOTAL	$1,746	$4,919	$3,173
% Increase			182%

FORECASTING

THE CURRENT CLIMATE

How is all this confusion over rates affecting the transportation manager's job as a budget planner? Several shippers tell DISTRIBUTION how they deal with forecasting.

By Nancy Entwisle, Associate Editor

The effects of deregulation have crept into every facet of the transportation business. Whether we are better off without it is debatable, but one thing is certain: deregulation has made the job of budget planning more difficult, especially for the traffic manager whose role in forecasting is becoming increasingly important.

DISTRIBUTION spoke with several shippers whose roles include forecasting. One was Howard Hubert, general traffic manager for American Olean Tile Company, based in Lansdale, Pa. Hubert's company, equipped with a very sophisticated traffic department, is utilizing more piggyback carriers these days, but the bulk of his tonnage is shipped via motor carrier. Very little rail boxcar is used. Increasing intermodalism, as well as deregulation, has made Hubert's job tougher.

"In some modes," he says, "rates are increasing. In others, they're decreasing. There's no consistency. Consequently, when forecasting, you really have to try to anticipate these various fluctuations."

PQ (Philadelphia Quartz) Corporation, a mid-size commodities and chemicals company based in Valley Forge, Pa., uses mostly motor carriers for its transportation needs. Operating its private fleet consumes about 10 percent of its transportation dollars. Piggyback is rarely used. DISTRIBUTION spoke with PQ's Denise DiSalvio, transportation equipment coordinator and vice president of the Delaware Valley (Philadelphia) chapter of the National Council of Physical Distribution Management (NCPDM). DiSalvio sees forecasting as an extremely important aspect of her job.

"Companies are taking a more critical look at their expenditures while keeping in mind that traffic has become a cost and profit center," she says. "We must constantly be looking for ways to bring down costs while keeping up or improving present service levels.

"One way to do that is to take the projected sales and profit figures and forecast the level of service and equipment needed to support that volume of business."

DiSalvio bases her forecasts on the information she receives from PQ's sales staff. They predict how much their customers will purchase from PQ within the year. DiSalvio takes that figure, calculates it into a formula, and comes up with the number of cars that will be needed to service that amount of business.

It seems that DiSalvio's prediction (or forecast) is based on yet another prediction. So are her forecasts very accurate?

"That's a tough question," she replies. "We find that the sales department plays games with their volume sales figures because they have a goal in mind.

"Let's say their sales goal for the year is $90 million. They aren't basing their goal figure on an individual, or customer by customer basis, but on the total amount of sales from all their customers combined. As long as that total meets with their goals, they're satisfied.

"But that doesn't satisfy our needs, because we have to service each customer on an account by account basis, and we have to make up for any shortfalls in the budget.

"That's where the art of forecasting comes in. Anyone can plug in a formula, so a service like Chase or Wharton Econometrics wouldn't help us because those people don't work at PQ every day. I do, and I have a feel for our specific business. I know our customers and I know our sales staff and how they work."

Deregulation has also made DiSalvio's job more difficult, as motor carriers can offer PQ all kinds of services at decreasing prices. Traditionally, PQ has used the smaller carriers, but the company is finding

continued

IMPORTANT FINDINGS ON MODAL ECONOMICS

Excerpt from *Transportation Strategies for the Eighties*, pp. xv-xvi.

- In the most likely scenario, 9 of the 14 modal segments will experience cost increases greater than the PPI during the 1980s.
- Productivity gains will be critical to modal economics. The high-productivity Scenario IV shows 7-39 percent reductions in annual cost increases as compared with the no-productivity gain Scenario I.
- Small shipment costs—both motor carrier LTL and surface small parcel—will increase at lower rates than air modal costs because of major labor wage concessions during the early 1980s.
- There will be relatively little difference in the annual cost increase percentages in the highly competitive nonbulk volume shipment category (rail carload, intermodal, general truck, private truck) over the decade, although rail carload costs may increase at a somewhat faster rate during the latter half of the 1980s.
- Rail will tend to improve its competitive cost position somewhat in bulk and mass volume shipments during the 1980s.

Fig. 1

MODAL COST PROJECTIONS
(compound growth rates: 1980-1990, percent)

	Scenario I	Scenario II	SCENARIO III Most Likely	Scenario IV	Scenario V
PPI	8.5	8.5	8.5	8.5	8.5
SMALL SHIPMENTS					
Motor Carrier—LTL	9.3	8.4	7.5	6.7	7.1
Surface Small Parcel	9.1	8.7	8.3	7.8	8.1
Air—Small Parcel	10.2	9.6	9.2	8.8	8.5
Air—Combination Carrier	9.7	9.5	9.0	8.6	7.6
Air—All Cargo	9.9	9.7	9.1	8.6	7.6
VOLUME SHIPMENTS					
Intermodal[1]	10.1	9.1	8.4	7.8	7.7
General Truckload	9.8	9.2	8.6	7.6	7.6
Private Truck	9.7	9.1	8.4	7.5	7.7
Rail Carload	10.4	9.3	8.7	8.1	8.2
Bulk Truckload	9.5	9.6	9.2	8.5	8.7
Barge Tow	9.6	11.5	9.8	8.7	8.7
MASS VOLUME SHIPMENTS					
Rail Unit Train	10.4	9.6	9.2	8.8	8.2
Large Barge Tow	9.7	11.0	9.7	8.2	8.5
Oil Pipeline	5.9	5.8	5.7	5.5	4.6

SCENARIO
I—No productivity gains; no change in user fees other than changes already scheduled and inflation of existing fees.
II—Low productivity gains and high user fees.
III—Most likely level of productivity gains and user fees.
IV—High productivity gains and low user fees.
V—Most likely level of productivity gains and user fees; fuel increases at 50 percent of macro projection.

---

[1] Door-to-door service.

The following information has also been taken directly from the NCPDM report (except where italicized). It will help you understand the preceeding chart more clearly. Only partial information has been excerpted. For the total picture, see pp. xii-lxx **of TRANSPORTATION STRATEGIES FOR THE EIGHTIES.**

In general, the research disclosed that the legislative, regulatory, and legal environment of the early 1980s will continue through the decade. To be sure, there will be pressures from some for further deregulation, including elimination of the ICC. These efforts will probably not succeed because of a fear that complete deregulation could weaken our transportation system. Others will press for reregulation, but unless there are massive, financial problems in a specific mode, or evidence of unreasonable, discriminatory or predatory practices, the initiatives for reregulation will not be successful.

RAIL

- Antitrust immunity on railroad single line rates will continue, and antitrust immunity on joint line rates will be substantially reduced or eliminated.
- Railroad market dominance and maximum rate issues will probably be resolved on a case-by-case basis using multiple criteria. An abritrary, fully allocated cost cap will probably not be established by the ICC, but one could be required by the courts.
- Railroad contracts will be encouraged and will receive virtually no regulatory review except for impact on ports, and will occasionally be challenged in the courts.

MOTOR CARRIER

- Motor carrier antitrust immunity on single line rates will be eliminated, and antitrust immunity on joint line rates will be substantially reduced.
- Motor carrier rate innovation will be encouraged, regulatory rate lag will be minimal, and ZORF will be retained.
- The highway system will remain under severe financial pressure, and heavy trucks will bear a greater portion of the construction and maintenance costs.

that it is no longer feasible to do so.

"I'm concerned about the smaller carrier," DiSalvio said. "They can't compete with the Roadways and the Yellows. In the long run, I think deregulation is going to be counterproductive because it'll force the little guys out of business. After the price wars are over and they've cleared the highways of all the small carrier corpses, the big guys will jack their prices way up and we'll see a deterioration of service.

"But we have to keep our costs down, too, so when those big carriers come in here with all sorts of fantastic deals, we have no choice but to do business with them."

From what's been said so far, you can see that forecasting is a volatile undertaking. It seems that mere guesswork in planning the budget would be just as accurate as plugging a formula into projected sales goals. So why bother?

American Olean Tile's Hubert said that forecasting helps him a great deal on quotations. "We get quotations for a year to 18 months in the future because a lot of the jobs that our contractors handle are for construction that might not take place for quite some time. And, of course, we have to predict what current freight rates will be a year to 18 months from now.

"And we've been fairly successful, but I think the type of carriers we use influences our success.

"We have a tremendous amount of irregular route carriers. We also have good rapport with our carriers, so we know quite a distance in advance what their rate increase needs will be.

"We've compiled a history of rate increases, and that history has helped us in creating pretty accurate forecasts."

Alfred Daviau of Bristol Myers' corporate transportation and one of the NCPDM members who collaborated on TRANSPORTATION STRATEGIES FOR THE EIGHTIES (see Box on page 39) gave us his reasons for using forecasts.

"We've found them to be reasonably accurate," Daviau explains. "Forecasting is very helpful because distribution expenses, at least in the consumer goods industry, are totally absorbed and go into the cost of goods. Therefore, it's important in company pricing plans to

continued

This scenario, of course, may be altered by the proposed five cent per gallon fuel tax. Anyone who uses the national highways will be sharing in the financial burden. However, "heavy trucks will bear a greater (financial) portion" because trucking companies use more fuel.

Notice the figures listed next to "Motor Carrier—LTL" under "Small Shipments." DISTRIBUTION feels that these figures aren't as high as they should be. But Robert V. Delaney, manager of distribution planning and analysis at International Paper Company and chairman of this NCPDM report, explains: "We anticipated the labor concessions that have arisen in the Teamsters' arrangement. Look at the modal cost projections for 1985-1990 (not shown in this article). Our most likely scenario shows LTL costs going up 8.5 percent. You have to understand that we are dealing with cost, not price. All we can show is the pressure of cost on price."

WATER, AIR, PIPELINE

- Additional user fees equivalent to increasing the price of fuel approximately 40 percent will be imposed on barge operators by 1985.
- Major inland waterway rehabilitation projects will be funded throughout the decade, but only after extensive debates, studies, and even court challenges.
- The Tennessee Tombigbee project will probably be completed, but no new major waterway projects will be begun.

TECHNOLOGY

A number of technological innovations introduced during the past 30 years revolutionized the transportation and distribution industries. Most notable were the diesel and jet engines, the computer, and containerization. During the 1980s, only one development of similar importance is expected—the rapid evolution of computerized information systems. Other technological innovations will refine existing modal technology to meet specific needs such as increased fuel efficiency and greater equipment productivity.

LINES OF BUSINESS

- The major carriers will tend to offer a broader range of services.
- Technological advances and the breakdown of legalistic barriers will stimulate greater intermodal cooperation and coordination. Multimodal transportation companies will become more commonplace, but will not dominate the industry.
- Some firms, primarily leasing companies, will seek to provide total transportation and distribution services, but the concept will not become widespread during the decade.

SCOPE, CONTROL, AND SCALE

- Carriers will seek to expand single line service markets and rationlize operations through mergers, acquisitions, and divestitures. There will continue to be significant "shakeouts" in each mode. There will be three to five national railway systems by 1990.
- Larger companies will increase their aggregate share of activity within each mode.

MARKETING

- Competition within and among modes will increase. The for-hire carriers will respond to the freer marketing environment by emphasizing industrial marketing techniques including market segmentation and customized price/service packages.
- Intermediaries—forwarders, agents, brokers, etc.—will continue to play a major role in rail, motor carrier, and air transportation. Individual carrier strategies will continue to differ on the use of intermediaries.
- Carriers will continue to price flexibly with emphasis on commodity, industry, lane, and customer profitability.
- Proprietary transportation will continue to be a major competitive threat. For-hire carrier responses will include (1) intermodal cooperation and (2) direct competition primarily using contracts.
- Traditional field sales activity will be balanced to a greater degree by more sophisticated marketing and sales programs.

TECHNOLOGY, LABOR

- Transportation companies will aggressively seek opportunities to improve efficiency through improved information systems, better planning and control procedures, and more favorable labor agreements.
- Nonunion labor will account for a larger proportion of total transportation activity.
- Transportation companies will increase their technological interfaces with major shippers to (1) enhance the competitive position of the carrier; (2) facilitate the carrier's operations and investment planning; and (3) provide information and service support to the shipper.

FORECAST

have an idea of what's going to happen when, and what the trends are going to look like. Transportation and distribution costs are a pretty healthy chunk of the total bill."

Speaking of the future, Daviau told us that Bristol Myers hadn't considered the possibility of paying a five percent fuel tax in the future. "That's something we didn't plan on when we did our budgeting for August 1983," he says. "If it passes, it's obviously going to have an impact on us, but we don't know to what degree.

"This is where forecasting comes into play, because you can go back to your company and say, 'Wait a minute—we said we were going to spend X amount of dollars for this year. Now it looks like we might be spending X-plus more than we forecasted.'

"In a well-managed company, you like to be able to foresee what's going to happen, rather than be surprised. And if extra bucks are needed, that company will shell them out if it wants to stay in business."

Dr. Bernard J. LaLonde, James R. Riley professor of marketing and logistics at Ohio State University in Columbus, has his own opinion as to the reasons business management uses forecasting when planning its transportation (or any other) budget.

"A business manager uses forecasting mainly to cover his or her own butt," contends LaLonde. "I think people would rather fight a forecast up front and go to a boss and say, 'Look—I'm budgeting a seven percent increase in warehousing . . .' rather than try to defend a two billion dollar budget variance in capital.

"I think a lot of the care that goes into forecasting is really an attempt not to get caught in a negative budget forecast just because that's the way the company's run. If you have a negative variance in your actual versus budgeted figures, you end up

FORECASTED INCREASES IN DISTRIBUTION COSTS

DISTRIBUTION's November 1982 issue contained a study researched by Bernard J. LaLonde, Ph.D., Riley Professor of Marketing and Logistics, and Richard Brand, Research Associate, both of The Ohio State University.

That study, entitled "Distribution Careers 1982," showed the results of a carrier pattern survey solicited from distribution executives in U.S. firms.

The data utilized in the November report was obtained from a detailed, four-page questionnaire that was mailed to 468 members of the National Council of Physical Distribution Management (NCPDM) during the summer of 1982. A concerted effort was made to achieve a sample balanced on both an industry and a geographic basis. The 156 questionnaires (131 usable) that were returned represented a response rate of approximately 33 percent. The summary results were reported in the body and tables of "Distribution Careers 1982."

The following table was not included, however. In fact, it has never been published before. Dr. LaLonde told DISTRIBUTION how he arrived at the figures shown below.

"I asked those surveyed to give me the percentage difference between their 1982 and 1983 budgets," says LaLonde. "But we were comparing apples and oranges, because some of the percentages were calculated by fiscal year and others were calculated by calendar year.

"So then I asked the manager, the director and the vice president of each company surveyed to give me his own, individual estimate of what he thought the budget percentage difference would be between 1982 and 1983.

"I ran a standard deviation on each set of three estimates. The estimates were so close, I found that I could combine the estimates of all three management people into one estimate.

"The figures shown below are the average results of these sets of estimates. Statistically, the numbers have a high degree of reliability."

Fig. 2 **1983 vs. 1982**

Cost Category	*% Increase*
Rail costs	7.4
Motor carrier-LTL	8.5
Motor carrier-TL	8.6
Warehousing-private	7.1
Warehousing-public	7.1
Fuel-gasoline	8.7
Fuel-Diesel	8.9
Total distribution costs	7.3

Fig. 3 **AVERAGE DISTRIBUTION COST BY INDUSTRY**

INDUSTRY	% OF SALES	$/CWT
INDUSTRIAL NON-DURABLES	9.83	33.19
CHEMICALS AND PLASTICS	8.74	4.80
NON-CHEMICAL	11.22	24.08
INDUSTRIAL DURABLES	7.19	32.47
VALUE<$5/LB	7.75	15.68
VALUE>$5/LB	6.50	53.46
MEDICAL/HOSPITAL	9.82	132.72
CONSUMER NON-DURABLES		
PHARMACEUTICALS/DRUGS<$10/LB	11.35	34.65
PHARMACEUTICALS/DRUGS>$10/LB	4.51	111.73
DRUG WHLS/DIST	10.45	40.09
HEALTH/BEAUTY	6.81	18.16
NON-FOOD GROCERY	10.03	9.18
GENERAL MERCHANDISE	8.49	23.58
FOOD PRODUCTS	7.76	5.77
DRY AND PACKAGED	7.91	5.97
CANNED AND PROCESSED	8.58	5.12
TEMPERATURE CONTROLLED	7.14	6.10
CONSUMER DURABLE	9.02	32.36
APPLIANCES<$5/LB	6.60	19.09
ALL APPLIANCES	6.84	29.64
GENERAL MERCHANDISE	10.65	34.41
RETAIL DISTRIBUTION	8.99	23.86

Each year, Herbert W. Davis and Company, consultants in physical distribution, assembles distribution cost figures and customer service information by industry grouping from data provided by the 225 companies making up their database. The following conventions are used in accumulating or estimating costs: raw material and work-in-process transportation; finished goods transportation; warehousing; order processing; administration; finished goods inventory carrying charge; other costs (special costs or charges not otherwise classified above, such as duties, license payments, service-related labor and repairs, etc.). Distribution costs are shown as a percentage of sales or as cost per hundredweight. Sales dollars are for the same period that applies to the physical distribution costs (usually one year) in terms of net revenue. The total weight volume figure should correspond to the dollar volume shown above.

NCPDM'S TRANSPORTATION STRATEGIES FOR THE EIGHTIES—WHAT'S IT ALL ABOUT?

In the fall of 1981, NCPDM signed a contract with the consulting firm of Temple, Barker & Sloane (TBS) for research that was designed to achieve four specific objectives:

—Develop a framework for defining transportation strategy and describing its interrelationship with corporate and logistics strategies.

—Identify and analyze key external factors that will affect transportation management in the 1980s.

—Assess how the U.S. domestic transportation modes might respond to these factors.

—Analyze the impact of the changing external factors and modal responses on transportation and physical distribution management decisions.

The TBS research team achieved these objectives to a surprising degree in the recently published research report entitled, TRANSPORTATION STRATEGIES FOR THE EIGHTIES. The data, charts, graphs and recommendations in this book will help transportation and distribution managers formulate transportation strategies in a business climate that is undergoing radical change. The report will serve as a guide for the evaluation of the critical forces of change and relate these forces to day-to-day operating decisions that must be made by shippers and receivers.

Most of the research report treats the "what" of transportation strategic planning by covering external trends, carrier strategies, corporate and logistics constraints on transportation strategies and promising transportation strategic options.

The final chapter in the research report addresses the "how to do it" question and indicates how an individual transportation manager can use the specific data and findings of this study to develop strategic transportation plans for his or her firm.

In reviewing the study, DISTRIBUTION spoke with Robert Delaney, head of the NCPDM study committee about shipper feedback. He not only provided us with some insights about shipper response, he turned out to be the study's best critic.

On reaction to the 265-page look-ahead, Delaney says all the feedback has been positive. "Even from the Teamsters," he says with delight.

The single loudest source of criticism for the study has been its focus on domestic transportation. "That was my decision," Delaney explains. "I asked the NCPDM committee working on the study if there was a need to incorporate transportation strategies beyond the U.S. and if it was appropriate for the NCPDM. A lot of discussion proved there was a need, but we concluded that an international scope was a separate subject for a separate study. We found that combining a national with an international scope just didn't merge well. It is fair criticism, though," he says.

The study was also limited by a $150,000 budget. Delaney laments that the study neglects social concerns and political pressures, but he explains that the committee's job was to do an economic study only.

"We felt that previous economic studies had been weighed down by too many other concerns," Delaney points out, adding that economic forecasting is a tough job all by itself.

Copies of this study, TRANSPORTATION STRATEGIES FOR THE EIGHTIES, are available from the NCPDM at $25.00 for members and $50.00 for non-members. To order your copy, write the NCPDM at 2803 Butterfield Rd., Oak Brook, IL, 60521, or call (312) 655-0985.

with a lot of problems.

"Good forecasting is a way of survival in management. If you show up with a seven figure budget variance, you get top management's attention in the wrong way very quickly."

While shippers are becoming more involved in using high technology to facilitate and expedite business procedures, most of the people DISTRIBUTION contacted do not use computers in forecasting. The closest thing we found to computerized forecasting was at PQ Corporation. This company's sales staff has a program, supplied by Numerax, that enables them to project sales and profit goals. The printout is then sent to Denise DiSalvio for her own forecasting purposes.

Dr. LaLonde feels that the high technology being used to make transportation more efficient can also make transportation cost fluctuations more predictable.

"But the whole problem with forecasting," says LaLonde, "is that when you really need a forecast, it's almost impossible to make one. This is true right now because all the modes are moving in every which direction.

"When everything is stable, it's easy to forecast, but that's when you don't need it as much.

"So there's almost a built-in problem—a real paradox.

"In trying to forecast the future (and essentially, you can never do it 100 %), you're simply trying to reduce the level of uncertainty.

"If you can do that, even 20 or 30 percent, it might be better than not doing it at all." ■

Fig. 4

GENERAL SHIPPER RESPONSE STRATEGIES

Excerpt from *Transportation Strategies for the Eighties*, p. ixx.

What strategies will likely enable shippers and receivers to improve their companies' competitive positions in the 1980s? The research suggests that a set of nine response options is common to all types of shipments:

- Intensively manage the transportation function relying on strategic and operating plans, budgets, formal reviews, and effective organizational communication. Convert from a regulatory support function to an aggressive management function not unlike corporate or divisional purchasing organizations.
- Improve information planning and operating systems. At a minimum generate freight flow information from the freight payment system.
- Use freight terms selectively to control or influence transportation decisions, consistent with marketing strategies.
- Review service requirements and ensure that premium transportation is used only when absolutely necessary.
- Consolidate shipments to build traffic volume.
- Concentrate traffic with a limited number of carriers to obtain maximum volume discounts consistent with service requirements.
- Expand the use of contracts to remove the uncertainties of service variability, equipment supply, rate escalation, and the use of the spot market.
- Reassess the economic and service attributes of proprietary motor carrier operations. Seriously question this policy if empty mileage is in excess of 10 to 20 percent.
- Develop or improve analytic and negotiating skills.

Chilton's

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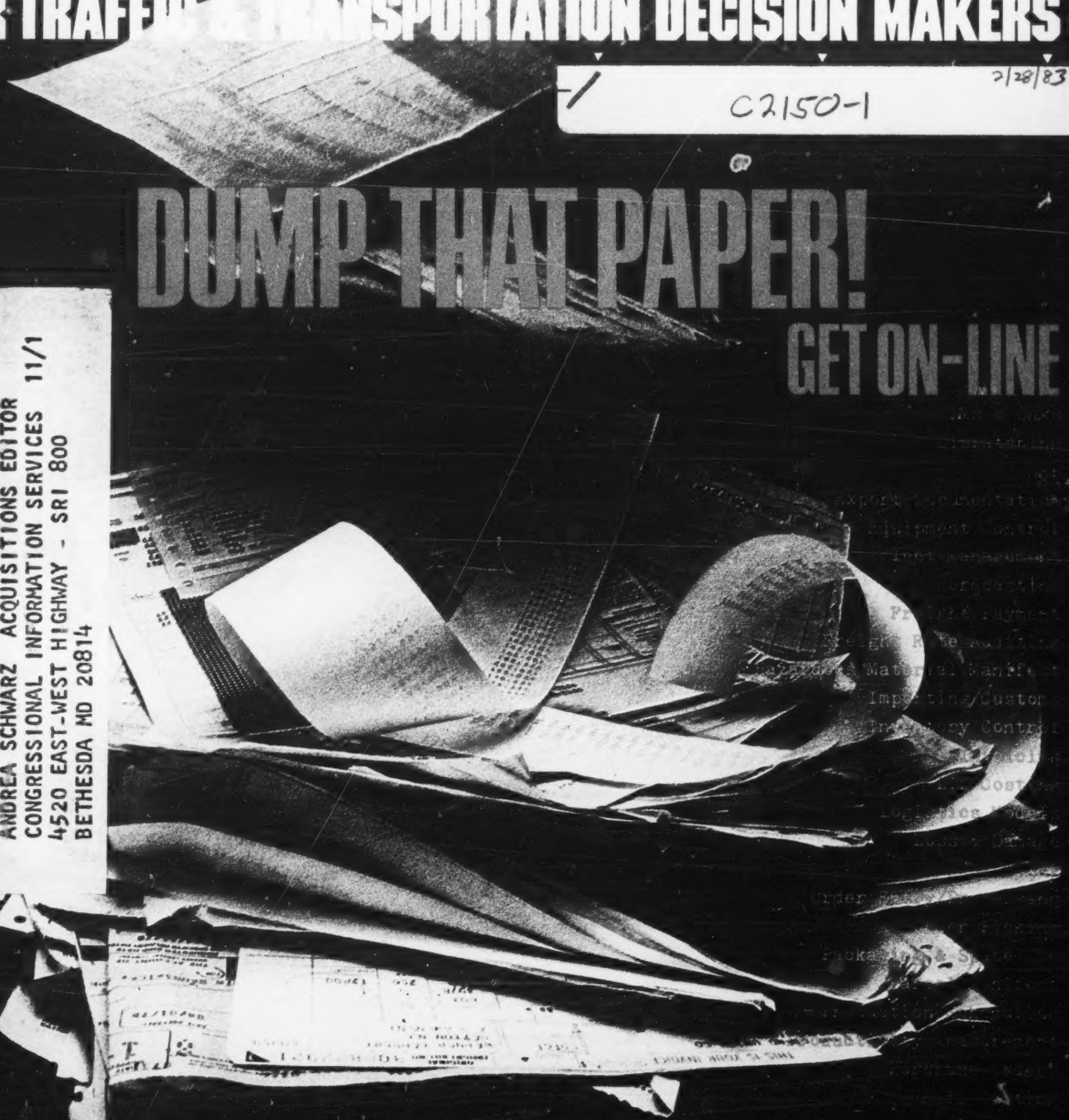
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SIMPLIFIED RATE BASES
STOW YOUR CONTAINERS RIGHT!
WHAT'S YOUR IMPORT/EXPORT RESPONSIBILITY?
TRADE ASSOCIATIONS IN DISTRIBUTION

VOLUME 82, NUMBER 2

FEBRUARY 1983

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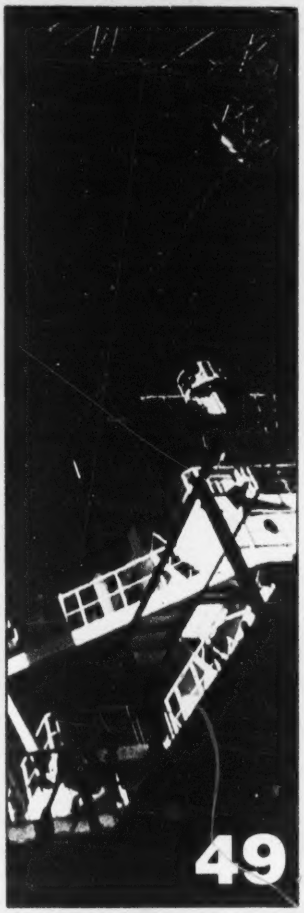

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On the cover: *With the merging of computer technology and distribution operations, mountains of paper reports can be replaced by tiny magnetic charges stored in an electronic "file cabinet" the size of a finger tip. Photo supplied by Numerax.*

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FORECAST

WE ARE IN FOR A BIG ECONOMIC CHANGE

Recent economic experience has shown us that recovery from an economic downturn is pretty much routine. Prices fall, unemployment rises, interest rates moderate, and recovery begins slowly. Even though the current recession has the same superficial characteristics, the level of recovery and the speed of the upturn will be a lot slower. This is due to the basic changes that are occuring in the economy brought about by the impact of the decline in the auto and steel industries, the huge government deficits, the changing nature of job requirements which will require workers to be more highly skilled, and the competition from foreign manufacturers. Companies will have to adjust to this new environment and develop distribution strategies that can take advantage of it. What will be needed is an assessment by firms on a market by market basis of what the distribution requirements of that market are. No longer can the distribution strategy of a firm be regarded as a uniform and homogeneous policy which is applied to all market segments. With the changing nature of the economy, traditional market segments are declining and new ones will be developing with revised customer service requirements.

Cost reduction can not be the overriding objective to drive distribution planning in 1983. Certainly distribution costs must be considered as a major factor, but SERVICE SATISFACTION for the customer should be the prime objective of distribution managers. Customers will be demanding improved service from their suppliers if they are to continue to do business with them. One distribution manager referred to this as "service completeness" and stated: "If my suppliers want my business, they are going to have to pay attention more closely to my service needs. I am under pressure to reduce costs, increase inventory turnover, and respond more quickly to marketing's requirements. I cannot do this alone."

The changes in the economy are reflected in the distribution industry. Rail shipments reached 76.1 billion ton miles. While this is an increase over the last quarter of 1982, it is 16.1 percent below the comparable period of last year. This decrease is also reflected in the *Distribution Index* for the rail industry which rose to 106.1 in February, but is expected to decline moderately through March, 1983.

Truck shipments are also expected to moderate during February and March, 1983. Intercity truck tonnage is off by 13.2 percent from a year ago and is expected to fall moderately through March as reflected in the *Distribution Index* to 115.4. All other areas of the distribution industry are showing similar trends with air shipments rising only moderately to 112.3 through March. In contrast, shipments by water are expected to decline to a level of 105.2 during the period.

Warehouse space utilization has been decreasing slowly through the last quarter of 1982 and into the first part of 1983. It will decline to a forecasted level of 110.4 through the first quarter. Inventory valuation, a key barometer of inflation continues its downward move falling to a level of 103.2 in March. Again, this reflects the continued drop in inflation. Overall the cumulative index is declining and will reach a level of 110.9 in March, 1983.

What this information reflects is that, while business is declining, distribution systems have to be changed to reflect market activity. As one distribution manager stated, "while business is declining we must be concerned about costs, but too frequently we forget service and this in the long run is the worst mistake a firm can make."

One indicator of recovery is a decline in the inventory/sales (I/S) ratio. According to the American Production and Inventory Control Society, Inc. (APICS), the I/S ratio dipped in both the manufacturing and trade sectors.

Manufacturing inventories have declined in 11 of the past 12 months for an aggregate reduction of $14 billion, reports the society. However, it also points out that over the past l6 months, new orders have declined $19 billion and shipments $10 billion. The decline is drawing to a close though. APICS expects orders to be flat, but shipments to increase one percent per month and inventories to decline one percent per month. ☐

KEY INDUSTRY INDICATORS — Dec. 82/Jan,83

Raw Steel Production:	5440 (1000 net tons)
Auto Production:	529,581 units
Truck Production:	164,712 units
Bituminous Coal Production:	78311 (1000 net tons)
Paperboard Production:	2904.8 (1000 of net tons)
Lumber Production:	12390 (1000 of net tons)
Rail Freight Traffic:	76.1 billions of ton miles
Intercity Truck Tonnage:	-13.2% (percent change from 1982)

DISTRIBUTION INDEX KEY FORECAST INDICATORS

	Dec/82	Jan/83	Feb/83	Mar/83
Truck Shipments:	114.2	115.3	116.1	115.4
Rail Shipments:	105.9	106.1	106.2	104.3
Air Shipments:	110.6	111.1	111.9	112.3
Water Shipments:	107.4	107.5	107.8	105.2
Whse Space Utilization:	113.7	112.7	112.2	110.4
Inventory Valuation:	103.0	103.6	102.1	103.2
Cumulative:	111.9	110.3	112.5	110.9

Distribution's

IMPORT/EXPORT SURVEY & QUIZ: THE RESULTS

World trade *is* in your hands. Here is the rundown on who, what, where, why and how U.S. companies trade globally. Also, we have a winner. No, we have five winners, and you will find the names listed at the end of this article, along with the answers to our quiz.

All good journalists know to get the facts: Who? What? When? Where? Why? How? So it was with this year's survey; we asked you for the facts.

Who (the position title of the person) is responsible for exported product? In 26 percent of the cases, the who is the export manager. While in 34 percent of the cases, it is the traffic manager. The remaining 40 percent, however, ran the gammut from distribution manager to vice president of materials.

In importing, we found a similar situation. In 21 percent of the cases, the person responsible for the imported product was the director of purchasing. In 31 percent, it was the traffic manager, but in a full 48 percent of the responses, the answers ran from sales manager through traffic analyst.

Where, we asked, does distribution enter into the international marketing cycle? A full 69 percent reported at the beginning, 13 percent said at mid-point, and 19 percent said at the end.

Who, in the majority of cases, do you export to? Affiliates were marked in 24 percent of the cases; agents were marked in 21 percent. Direct sales, however, gathered a full 52 percent.

The following charts will flesh out the remaining questions: What is the term of sale? From where do you import? To where do you export? How are shipments paid? And a host of other pertinent import/export questions.

IN THE MAJORITY OF CASES, WHAT IS THE TERM OF SALE?

	EXPORT	IMPORT
EX Works	5.0%*	8.0%*
C&F (CIF)	35.0%	24.0%
FAS	13.0%	8.0%
FOB (some point in U.S.)	50.0%	37.0%
Other	1.0%	2.0%

HOW ARE THE MAJORITY OF SHIPMENTS PAID?

Cash In Advance	4.0%*
Open Account	41.0%
Sight Draft	15.0%
Letter of Credit	49.0

EXPORT MOVEMENT BY MODE (INTERNATIONAL):

Ocean Carrier	76.0%
Air Carrier	24.0%

TO WHICH OF THE FOLLOWING INTERMEDIARIES ARE YOU LINKED ELECTRONICALLY?

Forwarder	60.0%*
Customs	8.0%
Bank	25.0%
Carriers	18.0%
Insurance Company	3.0%
Foreign Buyer or Seller	63.0%

**Adds to more than 100% due to multiple responses*

continued

THE RESULTS

WHAT KINDS OF ELECTRONIC DEVICES/SERVICES DO YOU USE IN YOUR EXPORT/IMPORT PROGRAMS?

Telex	89.0%*	Time Sharing Device	4.0%
Word Processor	21.0%	Private Co. Network	21.0%
Full Computer	38.0%	Other	5.0%
Mini-Computer	2.0%		

WHICH OF THE FOLLOWING FUNCTIONS OR DOCUMENTS ARE PREPARED ELECTRONICALLY?

Invoice	84.0%*	Shipping Letter	14.0%
Packing List	65.0%	Cert. of Origin	8.0%
Consular	0.0%	Import License	2.0%
Export Declaration	14.0%	Other	4.0%
Insurance Request	2.0%		

WINNERS OF DISTRIBUTION'S EXPORT QUIZ

It was a banner year for quiz takers. The vast majority of you answered all the questions on this year's quiz correctly. But, for those few who were tripped up, here is a rundown of the questions and the correct answers.

What is the most important document for international shipments subject to inspection and taxation by local government, because it shows the contents and value of each item precisely? The correct answer was A. Commercial Invoice.

What does the term T.I.B. usually refer to? The correct answer was D. Temporary Importation under Bond.

The oldest U.S. government program to promote exports through importing began in what year? The correct answer was A. 1789.

What are the main attractions to Puerto Rico for U.S. manufacturers? The correct answer was D. All the above.

An area in the U.S. that is technically outside our borders for customs purposes is? B. Foreign trade zone.

From the import/export experts who answered all five questions right, we held a random drawing. This year's winners are:

L. H. Davis, manager international distribution, American Cyanamid Co., Wayne, N.J.;

R. Keen, president, Morgans Inks U.S.A., Inc., Wayne, N.J.; and

L. Smith, traffic supervisor, NCR MSD, Mountain View, Calif., all win SHARP printing calculators.

J. Markland, traffic assistant, Magnecraft Electric, Chicago, Ill., wins a micro-cassette recorder; and

F. Longan, assistant traffic manager, Leggett & Platt, Inc., Carthage, Mo., wins a briefcase.

WHAT OUTSIDE SERVICES DO YOU USE FOR EXPORTS AND IMPORTS?

Freight Forwarder (air)	81%*
Freight Forwarder (ocean)	80%
Customhouse Broker	81%
Insurance	49%
Banking/Collection Service	43%
Warehouse (U.S.)	19%
Warehouse (Overseas)	12%
NVOCC	18%
Freight Auditing Service	26%
Freight Payment Service	18%

FROM WHICH AREAS OF THE WORLD DO YOU IMPORT?

North America (Canada & Mexico)	50%
South or Central America	19%
Northern Europe or UK	69%
Mediterranean or Southern Europe	26%
Middle East	5%
Africa	5%
Eastern Europe (Communist Bloc)	4%
South Central Asia (Indian Ocean)	4%
Southeast Asia	23%
Japan/Korea	56%
Australia/NZ	9%
Micro Asia (Pacific Ocean)	4%

TO WHICH AREAS OF THE WORLD DO YOU EXPORT?

North America (Canada & Mexico)	84%
South or Central America	67%
Northern Europe or UK	79%
Mediterranean or Southern Europe	47%
Middle East	52%
Africa	43%
Eastern Europe (Communist Bloc)	12%
South Central Asia (Indian Ocean)	30%
Japan/Korea	66%
Australia/NZ	54%
Micro Asia (Pacific Ocean)	18%

USING A SCALE OF 1 TO 10 WHERE 1=NOT DIFFICULT AND 10=EXTREMELY DIFFICULT, PLEASE RATE THE DIFFICULTY IN COMPLETING EXPORT OR IMPORT TRANSACTIONS IN EACH REGION:

	IMPORT	EXPORT
Western Europe	2.2	2.3
Eastern Europe	5.5	5.2
Central & South America	5.2	5.9
Africa	6.0	5.4
Middle East	4.9	5.5
Japan	2.5	3.0
Far East	2.3	3.2
Mexico	2.0	5.0
Canada	3.9	.9

■

*Adds to more than 100% due to multiple responses

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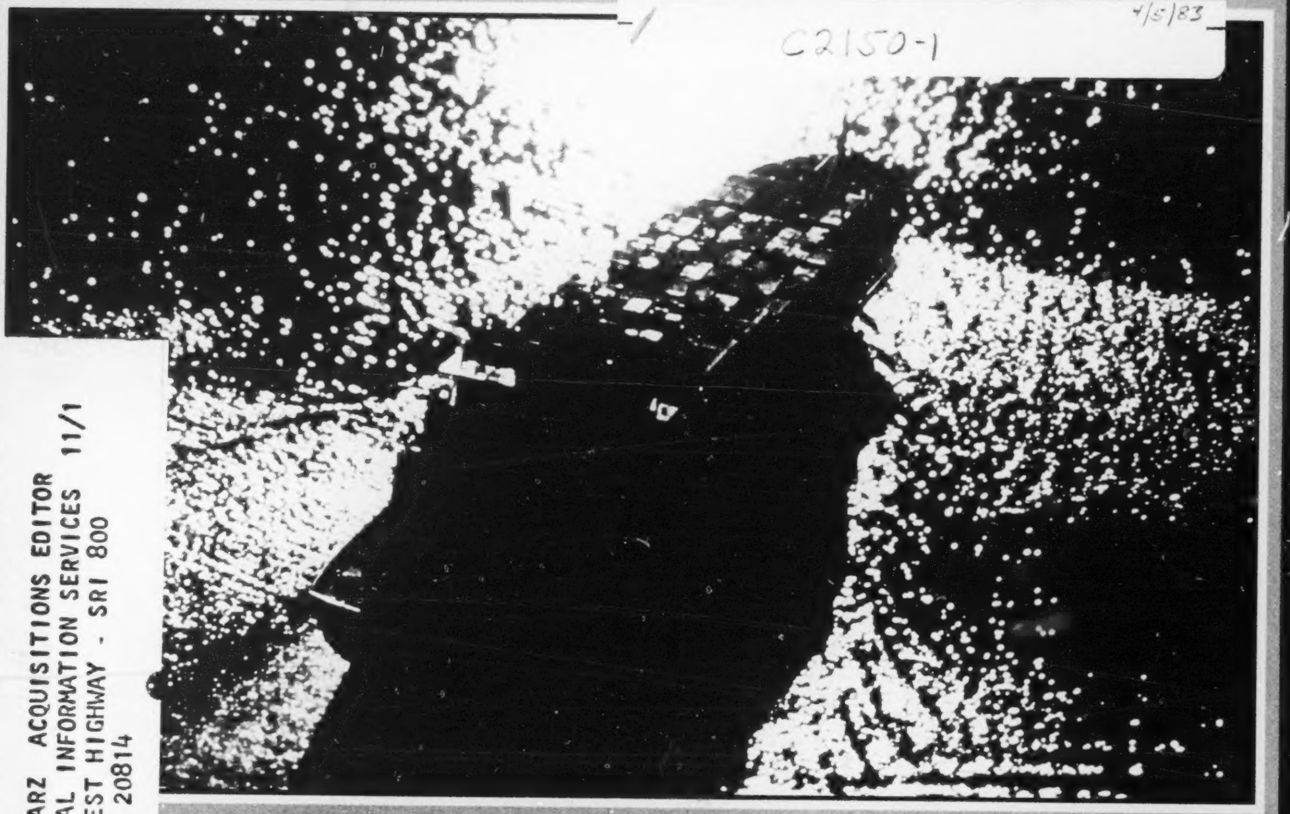

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OCEAN SHIPPERS

ADRIFT IN A SEA OF STORMY ISSUES

THE SHIP CHARTER ALTERNATIVE
HOW TO NEGOTIATE RATES
WHAT ORGANIZATIONS YOU CAN JOIN
THE SHUTDOWN: WHO LOST AND WHO WON?
MORE DISTRIBUTION SOFTWARE

VOLUME 82, NUMBER 3

MARCH 1983

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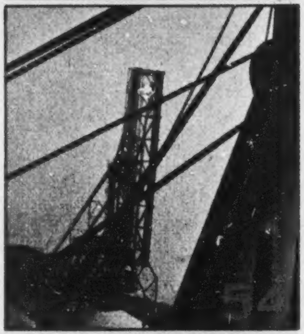

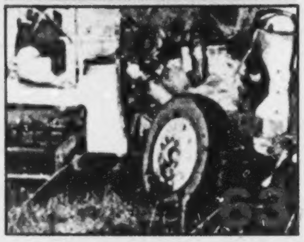

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FORECAST

STILL SEARCHING FOR THE RECOVERY

The economic recovery may be at hand. More likely, the recovery is still at arms' length.

The *Distribution Index*, compiled by Dr. Richard Lancioni of Temple University for **DISTRIBUTION**, suggests many managers in our industry believe there was a false start in February. Real recovery won't begin until at least the second quarter (see righthand box).

Purchasing managers are slightly more optimistic. Each month the National Association of Purchasing Management (NAPM) polls 250 member companies to measure new orders, production, employment, vendor performance and inventories. NAPM melds these figures and reports a single index figure. In January, this figure was 45.7. Although it was an improvement over the December composite index of 41, it was still below 50, which indicates the economy is still technically in decline. At or near the end of a recession, the index usually rebounds sharply from reading below the 50 level. The individual components of the NAPM survey are perhaps more revealing. Production and new orders are increasing. Employment and inventories are still falling. Vendor deliveries are improving only slightly, perhaps indicating that shippers are keeping inventories lean, even at the expense of backorders and customer service.

According to the American Production and Inventory Control Society (APICS), continuing high levels of inventory to sales (I/S) ratios indicate that any upturn will be "anemic and spasmodic." APICS' latest I/S ratios are for December 1982. The ratio for the manufacturing sector was 1.77. The ratio for the total economy was 1.52. Both show little or no improvement over earlier reporting periods. A return to equilibrium would require these ratios to be 1.6 and 1.4 respectively, which would require either a $30 billion increase in sales or a $40 billion increase in sales. Neither event is very likely, according to Evans Economics, the firm that tracks I/S ratios for APICS.

"The I/S ratio invariably declines after an upturn has begun, as sales increase rapidly," says Michael Evans, the consulting economist for APICS.

"However," says Evans, "the fact that inventories are still so high relative to sales strongly suggests further liquidation during the first and perhaps even the second quarter of 1983. Firms that jump the gun in their eagerness to rebuild stocks from depleted levels may find themselves with an unexpected surplus on hand.

"The fact that businesses have been burned so many times by false signals of recovery in the past three years makes them hesitant about tossing aside caution," says Evans. ☐

DISTRIBUTION INDEX FORECAST INDICATORS

	Jan. 83 (actual)	Feb. 83 (actual)	Mar. 83 (forecast)	Apr. 83
Truck Shipments:	115.3	116.1	115.4	114.9
Rail Shipments:	106.1	106.2	104.3	103.2
Air Shipments:	111.1	111.9	112.3	112.9
Water Shipments:	107.5	107.8	105.2	104.6
Whse Space Utilization:	112.7	112.2	110.4	111.1
Inventory Valuation:	103.6	102.1	103.2	102.6
Cumulative:	110.3	112.5	110.9	110.0

(Base year is 1976 where all shipment levels were indexed at 100)

The Distribution Index, which is based on actual and forecast data from over 100 shippers, indicates most distribution industry activities will drop during March and April. The number of truck shipments peaked in February with the index reaching 116.1, this was the highest level in many months. The Index forecasts truck shipments will drop to 114.9 through April. Rail shipments are following a similar path and will drop from a February level of 106.2 to 103.2 in April. Air shipments are bucking the trend by showing a slight increase from present February levels of 111.9 to 112.9 through April. Shippers' desires to hold tight inventories and use air freight to keep up service levels probably accounts for the stronger showing in the air freight sector. Water shipments, which only include domestic waterway movements, will decline to a level of 104.6 in April, down from a high of 107.8 in February. The hard-hit chemical and fertilizer industries, which use the waterways heavily, seem to account for this expected drop. Warehouse space utilization in public and private warehouses is also trending down, echoing shippers' intentions of keeping inventories low. This indicator will hit its low point in March at 110.4. It is expected to begin to rise in April, indicating that shippers may finally be rebuilding their field inventories. The inventory valuation index, which shows the effect of inflation as well as the amount of inventories, is remaining low. Our inventory evaluation index, if converted to percentages, would show an annual inflation rate of ony 3.5 percent. The cumulative index is a weighted average of all the above indicators. It is forecasting a decline from a highpoint in February of 112.5 down to an April level of 110. This forecasting indicator suggests that the much-touted recovery has had a false start, and we should not expect another push towards real economic growth until well into the second quarter of 1983.

The Distribution Index tells us managers are skeptical about the impending recovery. As one distribution manager stated, "My firm has been hearing recovery for the past three months and very little has occurred to affect our business. When my shipments start to pick up, I will believe it." Another distribution manager offered this opinion on the future, "Our customers have to have confidence to order. They are small independent businessmen who must make decisions on their own inventories. They don't think that their customers are ready to commit to large purchases and, therefore, are not ordering in bulk from my operation. When confidence is back the recessioin will be over. Until then all the forecasters can do is whistle in the wind.

(Base year is 1976 where all shipment levels were indexed at 100)

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ARE YOU GETTING RAILROADED?

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WHAT YOU MUST KNOW ABOUT ANTITRUST LAWS

VOLUME 82, NUMBER 4
APRIL 1983

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ESTABLISHED 1901 AS THE *TEAMSTER*
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On the Cover: Railroads are making tracks into an era of deregulated self-motivation. But the result has spurred many shippers to take a second look at Staggers.

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FORECAST

INTRODUCING OUR NEW FORECAST FORMAT

The DISTRIBUTION Forecast has taken on a new look. This department will now include statistics and forecasts for a broader assortment of indicators for transportation and distribution.

The Distribution Related Indicators includes production and sales of supplies and equipment necessary for shippers to move their goods. While no single one is a barometer of the industry, they jointly give a pretty good picture of anticipated business and distribution activity. This installment shows annual figures for such items as pallets, cardboard boxes, trucks, rail cars and non-residential construction. Future reports will show quarterly figures and forecasts.

Our list of Transportation Indicators includes diesel fuel prices, transportation stock movements, rail tonnage, and soon, motor carrier shipments. Our figures and forecasts will be on a monthly and quarterly basis.

The Motor Carrier Rate Bureau chart will appear as appropriate when the bureaus file for increases. This particular installment shows one of the largest increases ever requested by the bureaus, and should prove interesting, if not painful, reading.

Our own Distribution Index will continue to be reported. This index is based on responses from approximately 100 shippers and shows monthly changes and expectations for usage of transportation and warehousing, inventory planning, employment and material handling purchases.

Additional indicators may be added to our Forecast. We would appreciate any suggestions you have for such additions.

We also plan to report economic analysis from such industry groups as the American Production and Inventory Control Society (APICS), which tracks inventory to sales (I/S) ratios.

The report from APICS is not as cheerful this month as our other indicators.

The decline in the (I/S) ratio

continued

DISTRIBUTION INDEX FORECAST INDICATORS

	Mar.83	Apr.83	May.83	Point change from Previous Period
Truck Shipments:	115.4	114.9	115.6	+0.7
Rail Shipments:	104.3	103.2	105.1	+1.9
Air Shipments:	112.3	112.9	113.3	+0.4
Water Shipments:	105.2	104.6	105.9	+1.3
Whse Space Utilization:	110.4	111.1	113.2	+2.1
Inventory Valuation:	103.2	102.6	101.9	-0.7
Cumulative Index:	110.9	110.0	112.3	+2.3

(Base year is 1976 where all shipment levels were indexed at 100)

The regular Distribution Index Indicators are consistent with the trends reported in the Industry Indicators. For the month of April truck shipments reached a level of 114.9 and will rise to 115.6, an increase of 0.7 over April, 1982. Rail shipments are also expected to increase from a level of 103.2 in April to 105.1 in May, an increase of 1.9. Air shipments will also rise, but by a smaller amount, increasing by only 0.4 over April. Water shipments are expected to increasse for the first time in the past five months rising to 105.9 in May, 1983.

The largest increase in the index is for Warehouse Space Utilization which will rise to a level of 113.2 through May. The only indicator to decline is Inventory Valuation which fell by 0.7 from April.

TRANSPORTATION INDICATORS—

Monthly/Quarterly Trends

Diesel Fuel Prices (Cents per Gallon/Average)
(Interstate Commerce Commission)

Jan.83	Feb.83	Mar.83	2nd Qrt.83 (Forecast)
122.2	115.0	113.0	111.8

Dow Jones Transportation Index (Index Point Closing)
(Wall Street Journal)

Jan.83	Feb.83	Mar.83	2nd Qrt.83 (Forecast)
463.0	492.0	474.0	498.3

Rail Freight Traffic (Billions of Ton Miles)

Jan.83	Feb.83	Mar.83	1st Qrt. Total	2nd Qrt.83 (Forecast)
56.0	58.0	53.0	167	183

One of the most important transportation indicators is one we all see everyday: fuel prices. The price for diesel fuel has been dropping steadily all year, and no end is in sight for further price reductions. The price we estimate at midyear will be $1.11 and possibly even less. These fuel drops should have their greatest impact on shippers who have large private fleets, and those who ship a lot of air freight.

The Dow Jones Transportatin Index is also an indicator of industry performance, but one that is much harder to use as a working tool. Stock prices are thought to be about a six-month leading indicator of earnings. Thus, with the Dow transportation stocks moving up, and probably continuing to move up throughout the first half of 1983, carrier earnings should increase proportionally. The question is, however, will these higher earnings come from higher rates or just from greater volumes? Industry observers seem to think most of the increased earnings will come from higher volumes of freight, and not from higher rates.

from 1.51 to 1.47 in January reflects the good news which was already generally known about that month. However, it does not reflect the setback suffered by the economy in February which brings the decline in the I/S ratio to a temporary halt, according to Michael K. Evans, consulting economist to APICS. "There is nothing wrong with the economy that a few more months like January wouldn't cure," said Evans. "Unfortunately, we aren't going to get them. The decline in employment and retail sales in February, coupled with the expected reduction in production and orders, means that this recovery will end up proceeding only in fits and starts."

In spite of the heroic strides which industry in general and manufacturing in particular have made in reducing inventories during the past six months, Evans pointed out that the I/S ratios are still fairly high by historical standards. The overall I/S ratio of 1.47 is still well above the equilibrium level of 1.40 which occurred during most of 1978 and 1979 and again in late 1980 and early 1981. Similarly, the manufacturing I/S ratio of 1.68 is still significantly above the 1.60 level which will finally signal that producers can once again increase their stocks.

"It is still too early to begin rebuilding inventories," Evans warned, "because of the sluggish nature of final demand, the continued deflation in commodity prices and the uncharacteristically high level of interest rates. Car sales in particular were disappointing in February, declining to an 8.3 million annual rate in spite of the continuation of the below-market financing rates."

While the January figures taken by themselves might indicate that the overhang of excess inventories is close to vanishing, Evans cautioned that the decline in sales in February could push inventory stocks up again, meaning that decumulation would have to continue throughout the spring. "Based on our forecast of only 2 percent to 3 percent real growth in the first half of the year, we expect inventory liquidation to continue until midyear," Evans asserted.

"With virtually all the monthly indicators declining in February, the premature business optimism which blossomed in January will once again go back into hibernation," Evans claimed. ☐

DISTRIBUTION RELATED INDICATORS—

Annual Trends

Wooden Pallets (Millions of Units)
(National Wooden Pallet & Container Association)

1981	1982	1983 (Forecast)	% Change 82-83
252.1	228.3	267.0	+14%

U.S. Truck Sales
(Motor Vehicle Manufacturers' Association)

Under 33,000 GVW (Millions of Units)

1981	1982	1983 (Forecast)	% Change 82-83
1.95	1.80	1.89	+4%

Over 33,000 GVW (Thousands of Units)

1981	1982	1983 (Forecast)	% Change 82-83
89.0	76.0	87.0	+12%

Railcar Orders (Thousands of Units)
(Department of Commerce)

1981	1982	1983 (Forecast)	% Change 82-83
44.9	22.0	31.0	+29%

Fibre Box Shipments (Billions of Square Feet)
(Fibre Box Association)

1981	1982	1982 (Forecast)	% Change 82-83
270.0	300.0	335.0	+10%

Non-Residential Construction ($ Billion Valuation)
(Department of Commerce)

1981	1982	1983 (Forecast)	% Change 82-83
30.6	30.0	32.1	+6%

To get a good longterm forecast of distribution activity, you don't have to have highly detailed statistics for shipments of all types of commodities. If you know production and sales figures for cardboard boxes, pallets, vehicles and other distribution-oriented items, you have a good idea of how the whole industry is going to perform. In other words, if you don't have a box, you can't ship it. Annual figures for 1982 for such items as fibreboard, wooden pallets, warehouse construction, truck sales and railcar building show how depressed the distribution industry was. But projections for 1983 indicate just about everyone is expecting a robust recovery.

MOTOR CARRIER BUREAU RATE CHANGES

First Half 1983

	(Average % Increase)	
Rate Bureau	LTL	TL
Central	2.0%	2.0%
Eastern Central	7.0%	3.0%
Middle Atlantic	5.9%	3.0%
Middle West	7.0%	3.0%
New England	5.6%	5.0%
Pacific	5.4%	3.0%
Rocky Mountain	4.8%	3.0%
Southern	6.4%	2.0%
Central & Southern	7.5%	3.0%

The general rate increases proposed by the major motor carrier rate bureaus to go into effect April 1, will probably result in the largest revenue increase ever requested by the nations motor carriers, according to the National Small Shipments Traffic Conference (NASSTRAC). This increase could give carriers an additional $773 million each year. The largest planned increase in LTL is in the Eastern Central territory with an average increase of seven percent. For TL traffic, the largest planned increase will be in the New England area with a projected change of five percent. These rate increases are in spite of recent decreases in carrier costs.

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GUIDE TO STATE TAXES/REGS
FREIGHT BROKERS: WHO ARE THEY & WHAT DO THEY DO?
A BATTLE'S BREWING OVER CLASSIFICATION
HOW TO GET YOUR DISTRIBUTION WHOLESALE

VOLUME 82, NUMBER 3
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ESTABLISHED 1901 AS THE *TEAMSTER*
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FORECAST

BY DR. RICHARD LANCIONI

OPTIMISM ABOUNDS

The expansion in the economy for the second quarter continues to look bullish. Many economists predicted a slowing of the recovery during the second quarter, but they will probably be proven wrong. With factory production capacity at only 69.8 percent their is still a lot of room for improvement. Inventories continue to be low, so there is still a lot of growth expected in this area. In the monthly survey of the National Association of Purchasing Agents, 51% reported that they were optimistic about the future. This compares with only 25% in November, 1982. In the employment area only 15% reported lower employment rates in their companies. In December, 1982, 32% of the purchasing agents reported lower rates.

The biggest problem now is high interest rates. As long as they remain unusually high, given the level of demand, the recovery will expand at a slow rate. If they decline to more realistic single digit levels, the expansion will be much more rapid. The April newsletter of the American Production and Inventory Control Society warned members to be cautious about the future. Their position is that the first quarter recovery has proceeded as anticipated, but that auto and housing sales will stagnate unless interest rates decline another 4 or 5 percentage points during the second quarter. The recent rise in primary metal orders was due to three factors: some hedge buying because of worries about strikes and price increases, the normal restocking of inventories, and an unwarranted optimism about auto sales. These factors according to APICS are not sufficient to keep metal orders rising over the long term. What the Society forsees is a cautionary second quarter, with a lot of "ifs" and "maybes."

As one distribution stated, "Our orders are picking up and our customers are certainly more confident, but remember we were so low before the recovery started that we have to come back along way before my firm reaches its normal operating level." □

DISTRIBUTION INDEX FORECAST INDICATORS

	Apr.83	May.83	Jun.83	Point change from Previous Period
Truck Shipments:	114.9	115.6	116.3	+0.7
Rail Shipments:	103.2	105.1	107.2	+2.1
Air Shipments:	112.9	113.3	113.8	+0.5
Water Shipments:	104.6	105.9	106.2	+0.3
Whse Space Utilization:	111.1	113.2	113.7	+0.5
Inventory Valuation:	102.6	101.9	101.3	-0.6
Cumulative Index:	110.0	112.3	112.9	+0.6

(Base year is 1976 where all shipment levels were indexed at 100)

The Distribution Index Indicators for the month of May reflect the continuing upturn in the economy. Moderating inflation as well as declining interest rates are sparking the advance. In the Distribution sector all indicators are positive with truck shipments reaching 115.6 in May and forecast to reach 116.3 in June, 1983.

Rail shipments show the largest increase, rising 2.1 points —from 105.1 to 107.2—from May to June. Air shipments will rise only moderately from 113.3 to 113.8. Although negative, the decline in inventory valuation by 0.6 from May to June shows the continuing decline in the overall rate of inflation.

TRANSPORTATION INDICATORS—

Monthly/Quarterly Trends

Diesel Fuel Prices (Cents per Gallon/Average)
(Interstate Commerce Commission)

Feb.83	Mar.83	Apr.15,83	July 83 (Forecast)
1.15	1.13	1.12	1.12

Dow Jones Transportation Index (Index Point Closing)
(Wall Street Journal)

Feb.83	Mar.83	Apr.15,83	July 83 (Forecast)
492.0	506.0	529.9	555.4

Rail Freight Traffic (Billions of Ton Miles)

Feb.83	Mar.83	Apr.83	Cumulative Forecast
58.0	53.0	55.0	222

The transportation sector of the economy will experience a modest increase over the next quarter as the economy expands. One of the reasons for the expected growth is the stabilization in diesel fuel prices. The five-cent-per-gallon fuel tax seems to be more than offset by dropping prices, and the continuing worldwide oil glut promises to restrain fuel price increases in the foreseeable future. Common as well as private carriers will welcome this moderate but promising trend as they take the first steps toward recovery from what has proven to be one of the worst recessions in the nation's history.

The stock market continues to reflect the optimism of investors as the transportation sector stocks continue to rise. Airlines seem to be the leading issues, but railroads and trucking firms welcome this new optimism, for it promises them access to much needed capital.

ARE DISTRIBUTORS REDISTRIBUTING DISTRIBUTION?

Shippers have mixed emotions about the recent resurgence of wholesaler-distributors as a link between manufacturer and end user. They recognize the valuable boosts that the use of a W-D can give to their company's marketing and sales efforts. They even concede that the distributors can make life a lot easier in distribution related areas such as warehousing, inventory control, or customer service. But just how big and good do you want to let a distributor get, wonder corporate distribution managers, before you run the risk of showing your own top management that there may not be any need for in-house expertise? **By Joseph V. Barks, Senior Editor**

The phone rang in our Washington office, and a polite, sincere-enough-sounding Oriental voice could be heard faintly on the other end of the line.

"Hello?" the voice asked. "This is Distribution magazine?"

Yes, the voice was assured, you have reached the right number. What can we do for you?

"Well," came the reply, "we are opening Seven-Eleven store in the area,and we want you to give us magazines to sell."

Knowing full well that our popularity has not yet reached the point where readers are rushing out at 3:00 AM to buy cigarettes, a Big Wheel, and the latest issue of DISTRIBUTION, we knew at this point that something was wrong. Either someone was making us the butt of what they thought was a clever crank call, or the voice had found a phone book listing for a magazine about distribution, when what it really wanted was the number of a magazine distributor.

A few more minutes of awkward dialogue revealed that the latter seemed to be the case. We're not sure if we ever succeeded in conveying the distinction between "DISTRIBUTION" and "distributors" to the voice, but we did manage to give it a more appropriate telephone number to call.

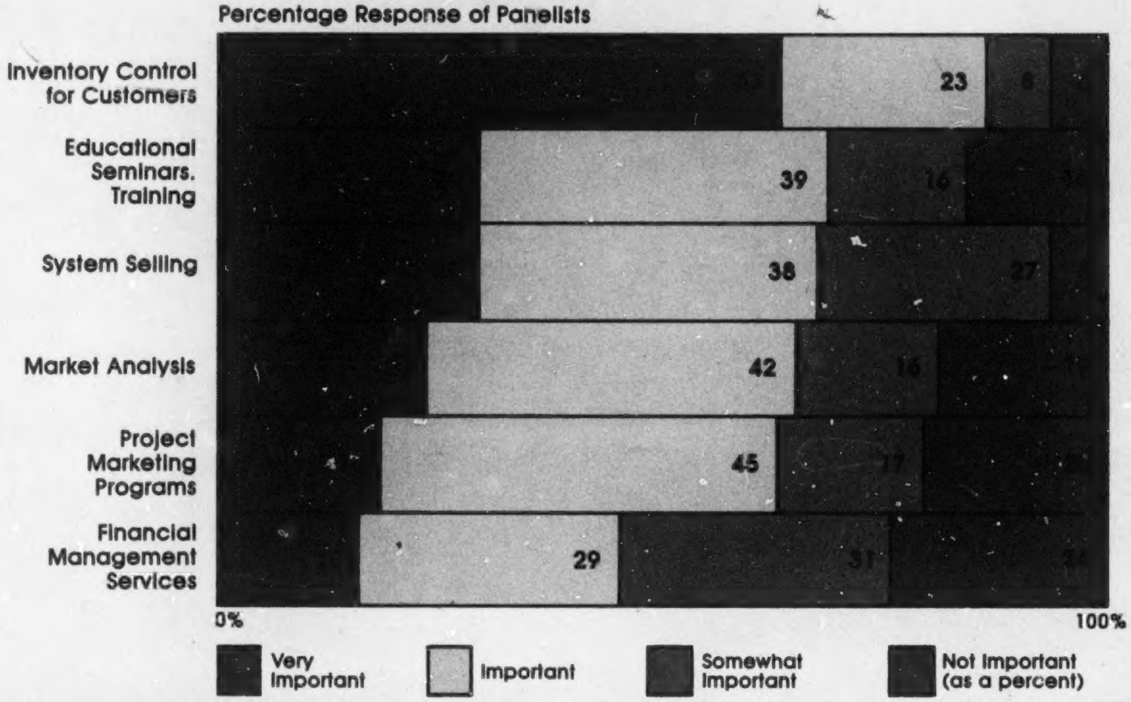
We won't contend that the phone call proved that wholesalers and distributors have returned to prominence in the distribution chain. Much more substantial evidence on that score can be garnered from a number of sources, such as: the changing membership rolls of shipper trade associations; DISTRIBUTION's own circulation list (where wholesaler categories now make up two of the five largest readership segments); or the recently completed study conducted by Arthur Andersen & Co. for the National Association of Wholesaler-Distributors.

But still, we're glad we got the phone call, because it served as a useful reminder of how distributors fit into distribution operations.

And it's a relationship that can be particularly wrenching for the professional transportation and distribution personnel within those companies. They can love wholesalers and distributors for the support they can provide and the heat they can absorb in such areas as customer service, inventory management, order processing, claims, and the like. Yet at the same time, they may fear and loathe the W-Ds who do such a good job of distributing a company's products as to eliminate any perceived need among corporate top management for in-house distribution expertise.

According to the people behind the Arthur Andersen study (see box, p. 67), the relationship between distributor and distribution promises to become much more strained as the wholesaler segment continues its growth. In fact, the Andersen people go so far as to say the distributor growth will come at the *expense* of the corporate p.d. organization. Corporate departments such as purchasing or production will be able to handle the task of getting the goods from plant to distributor, they say, and then the real

IMPORTANCE OF WHOLESALER-DISTRIBUTOR SERVICE OPPORTUNITIES TO SUPPLIERS AND CUSTOMERS IN THE 1980's



Not only did the Distribution Research & Education Foundation study find the service opportunities shown above, it also saw increase involvement for wholesale-distributors in packaging and final product conversion, pre- and post-sales service, labelling and technical sales service. The study noted that while the service mix will vary from company to company, the percentage of total sales revenues for the industry will double by 1990.

distribution work in order entry, inventory management, and customer service will be left to the W-D.

In light of such predictions, it's not surprising that it's easy to find shippers these days who can tick off a list of reasons for not using wholesaler-distributors. These shippers say they're trying to move their companies toward less of a reliance on a distributor network, and more toward direct links with customers and customer outlets, because of the following drawbacks they associate with W-Ds:

—Lack of control. Adding links in the chain between manufacturer and user, it is claimed, only makes it that much harder to ensure product quality, or service the disputes and problems that will arise.

—Added handling of products. Again, this unnecessarily increases the risks with regard to safety, quality and liability considerations.

—Lack of professional distribution expertise on the part of W-D personnel. Too often the people behind distribution operations amount to little more than glorified warehousemen, it is complained, and thus are ill-equipped to deal with carriers, perform distribution analyses or put out fires.

—Lack of sufficient care and attention for a specific product line from W-Ds that handle the merchandise of many manufacturers.

Few of these shippers admit that job security considerations might also have something to do with their aversion to using W-Ds, but it's undoubtedly just as influential a factor as any of the others, and should also be added to the list.

Curiously, though, it's just as easy to find shippers who remain confident and secure in their own lot as they make a case for why one *should* use wholesaler-distributors.

Using W-Ds, these shippers say, puts control where it really belongs, and in the hands of people who really know what they're doing.

This is distribution in its purest form, these proponents argue. Using distributors ensures that distribution functions will be carried out by an operation that exists primarily for the purpose of receiving, holding and dispensing goods. Isn't that preferable, they ask, to entrusting those functions to an operation that exists first and foremost for the purpose of producing goods?

Yes, these shippers are asked, but aren't you worried that shifting those responsibilites will make it a lot more difficult to justify your own existence? Not at all, they reply; there will always be a need for monitoring, supervision and directing of the distributors, to make sure corporate goals are being met.

Compounding the dilemma that confronts shippers who find themselves forced to make decisions about the use of W-Ds is the fact that such choices are rarely made solely on the basis of distribution considerations. Mix in the questions of whether the wholesaler-distributor can aid a company's marketing and sales efforts, or add to its products' value, or enhance cash flow, and a whole hew set of people and variables are intigrated into the decision-making process.

Then there's this hairy philo-

continued

sophical bear that must be grappled with: When you see a wholesaler or distributor, do you see a customer, or merely a means of reaching and servicing ultimate customers? Do you see a buyer, or just a supplier? The status to which corporate opinion elevates the distributor will correlate directly to its perceived levels of importance and usefulness.

And even if a company decides it does not see the distributor as customer, it may still have to defer on decisions concerning the use of distributors to the wants and needs of whoever it does choose to drape in that hallowed cloak. From a transportation point of view, this has become a particularly sticky problem, as the outbound/inbound tug-of-war has intensified between shippers and receivers who are both vying for greater control of ever-increasing volumes of freight. If whoever you do choose to recognize as the customer prefers a distributor link, you may be forced to use them despite your reservations.

With so many twists, turns, forks and dead ends confronting distribution managers, and their companies, as they ride into the W-D wilderness, it's no wonder that the degree of use of distributors now runs the full gamut. Furthermore, involvement with distributor networks has now spread far beyond the industries traditionally aligned with them, such as pharmaceuticals, food, beverages, magazines, metals, automotive parts, plumbing supplies, or electircal products.

Recent years have given rise to a vigorous entrepreneurial spirit in the W-D arena, to the point where there are now distributor networks for virtually any product. Almost as fast as new boom industries have sprung up—fast food, running shoes, computer games—distributor networks have sprouted to serve them. As a result, what was always a lively, fragmented industry is now bursting like a fireworks finale.

To make things even more interesting, distributors have been getting into manufacturing, manufacturers have been getting into distributing, and many in the business have either been on the prowl or the defensive, trying to buy others in the field, or avoid being swallowed.

Throw in the fact that the recession has made for a buyer's market which has allowed W-Ds to be choosier about what product lines they will handle, and more demanding with the chosen manufacturers with regard to credit terms, inventory levels, or just plain ol' price itself. It all adds up to a concept that's become increasingly difficult for individual manufacturers to sort out and get a grip on, as they try to figure out how wholesaling and/or distributing could be used.

And again, caught in the middle of this milling milieu is the corporate distribution executive. How to assess the potential value of these alternatives or additions to the distribution cycle? And once that value is assessed, how to implement whatever changes are needed to make use of what W-Ds might have to offer, without ripping up the logistics roadbed that has been so carefully laid both within the corporate structure, and beyond it to the ultimate customers?

It's safe to say that some of the objections voiced by shippers to W-Ds are no longer valid. For one thing, most distributors cannot be labeled unsophisticated anymore, either for the people they employ or the techniques they use. Increased computerization of W-D operations is just one way these resurgent companies are demonstrating that they're now with it when it comes to modern-day, deregulated distribution. Another indicator is the abundance of logistics talent that's gravitated in recent years to this end of the distribution discipline.

Where W-Ds tended previously to have a reputation as a final resting place for washed-up athletes who had to rely on consultants to bail them out of any remotely challenging distribution puzzles, some of the larger distributors today, such as Foremost-McKesson or Bergen Brunswig, have distribution professionals as good as anyones.

Many of these distributor superstars, in fact, leaped or were lured from the producer side. Their reasons for making the switch were many. Some were so enamored with distribution that they wanted to work for companies solely devoted to it. "Our 'product' here *is* physical distribution," notes a vice president at one leading drug wholesaler who had previously worked in the in-house department of a toy manufacturer. "We live and die by it, and right now it's providing a pretty nice living, thank you."

Others have made the jump from distribution to distributor because the latter affords them better opportunities, they say, to move into general management areas than does life under the manufacturing umbrella. And then there are those who moved over because they, too, perceived the same trends outlined in the Arthur Andersen study, and decided to join what they didn't feel they could beat.

These converts have helped return W-Ds to a formidable status both within the sphere of distribution, and in manufacturing as a whole. Distributors are once again a force shippers can't ignore, or run from; in fact, it's now their duty to get to know and understand the distributor link fully, to help inform management as to how W-Ds can be used to boost sales and cut costs.

Getting to know distributors, or becoming reacquainted, does not always require a full-scale plunge into the W-D network, however. Some shippers insist that there is nothing that says a W-D must always sell a company's products in addition to storing them. (The official definition of the W-D industry, however, does assume transfer of physical possession of the goods.) Shippers insist that they have had good success testing the distributor half of the equation before ever getting to the wholesaling part.

And testing the distribution side has also been a step-by-step process, they report. Usually, they have started by asking the W-D to do some warehousing. Involvement then slowly expands to include such things as local deliveries, inventory management, handling of returned merchandise, repairs, replacements, and other elements of customer service. If the full shift is then made to include the W-D as part of the manufacturers' sales and marketing network, further distribution functions such as order entry or invoicing can then be added.

Shippers who have felt out W-Ds in this manner report that potential problems in the areas of control, response or handling have surfaced quickly, in the early stages of the test. Catching them at that time, when the degree of the manufacturer's involvement has been limited, has reduced problems to a minimum and made it much easier to ease out of the arrangement before real disasters arise, they report.

Such trials, and the subsequent errors they've uncovered, confirm that some of the shippers' reasons for being wary of W-Ds do have merit. But they're still not enough to lead one to the conclusion that distribution managers should strive to avoid distributors at all costs, both for their own sake and for that of their company.

But there are as many cases of distributor and distribution learning to exist to the benefit of both as there are examples of one winning out at the other's expense.■

THE STUNTED END OF GROWTH

"Distribution is an expensive function," says James Norris, a partner with Arthur Anderson & Company. "And the issue is who can do the most economical job of carrying out this function. Frankly, right now we see a shift away from manufacturing doing it."

Norris makes these remarks while discussing the Arthur Andersen study, "Future Trends in Wholesale Distribution." The study was commissioned last year by the Distribution and Research Foundation of the National Association of Wholesaler-Distributors.

When the study projected a real growth in sales for the Wholesaler-Distributor industry of 4.2 percent annually for the first half of the 1980s, and 4.9 percent annually between 1986 and 1990, those who had paid for it were naturally delighted with the its findings.

Other interested parties also had little trouble finding something in the report that was to their liking.

Common carriers, for example, were heartened by the study's prediction that deliveries made by vehicles owned by the W-Ds will shrink from 66 percent of all orders in 1982 to 44 percent in 1990. "As costs of doing business and geographic growth of companies increase," the study said, "(wholesaler-distributors) will do less delivery with their own vehicles and will rely more on common carriers." The report added, though, that many of the larger W-Ds would seek to obtain for-hire authority for their own fleets and begin to solicit outside business.

Manufacturers, even though troubled by the portion of the report which forecast a growth in foreign investment in the W-D industry from 2 percent in 1970 to 15 percent in 1990, still could find their own positive notes, too. In particular, they could be pleased by the finding that distributors will be striving to provide value-added services to enhance the producers' products.

For distribution executives within those manufacturing companies, however, the Andersen report offered few words of cheer. And now here is Jim Norris confirming the basis for that gloom: W-D growth will have to come largely at the expense of in-house distribution operations.

"There has to be a tradeoff," Norris continues. "You're not going to duplicate those functions. It's a matter of scrutinizing the way those activities are carried out, and setting out strategically to assign them to the most efficient way."

In addition to the standard arguments that distributors are better equipped and more efficient because they exist primarily for the purpose of distribution, whereas distribution departments are only one part of a company organized around the manufacturing of a product, Norris also makes a strength-in-numbers case for the shift to W-Ds.

"Technological developments continue to put leverage into the hands of those with low unit costs," Norris says, "and low unit costs usually come through greater volume.

"All this works to accelerate the need for companies to combine resources whenever possible. It drives two manufacturers toward using the same wholesaler functions, because it's more efficient than doing them separately."

The only place distribution departments won't stand to lose from growth in the W-D industry, Norris says, is in the 15 percent of the market that will be foreign-owned. But of course, this amounts to small consolation, because these foreign-owned W-Ds will usually be pushing foreign goods that will be in direct competition with the domestic products the distribution personnel have been entrusted with.

Norris believes the increased offering of value-added services (assembly, fabrication, repackaging, etc.) by the W-Ds will enhance their attractiveness as a surrogate in-house distribution department. "(Value-added services) have been becoming an increasing part of the distribution function," he says, "and will continue to be as companies continue to move closer to just-in-time manufacturing."

Another trend that will help break down manufacturers' resistance to using distributors, Norris says, is the movement toward more mergers and acquisitions among W-Ds. More consolidations among wholesalers, he believes, will help create effective rebuttals to the criticisms that W-Ds are largely Mom-and-Pop or entrepreneurial ventures.

"Large companies, with sales of more than ~~$100 million~~, now account for 26 percent of the market," Norris says. "By 1980, they'll account for 44 percent."

"Conversely, small companies will decline from 42 to 22 percent. 'Get bigger or die' will be the rallying cry."

With the trend to larger companies will come a "blending" that will see more W-Ds handle more than one product line within an industry, as well as a variety of lines representing a variety of industries.

"You won't see the generic, across-the-board product offerings that you do with the Japanese trading companies," Norris admits. "We'll always be a nation of specialization to some degree. But there will less of a reluctance to take some natural steps into complementary industries. If you're in pharmaceuticals, it will seem easy enough to move into dental supplies. If you're in office supplies, you'll move into computers, tapes, discs and racks."

Making it possible for the distributors to keep track of everything as they expand will be what Norris terms "a radical change in information processing procedure." Eighty-three percent of all W-Ds will use on-line order entry systems by 1990, it is predicted, with manufacturers linked in on a computer-to-computer basis.

Electronic wizardry will also allow the W-Ds to offer wider coverage geographically, without adding new facilities. This can also be regarded only as a plus, Norris believes, by growth-oriented manufacturers that are seeking to broaden their customer bases.

One final factor that will keep W-Ds aiming to please, Norris says, will be the trend toward public ownership of such operations. By the year 1990, the Andersen report foresees a 50 percent increase in public W-Ds, to a point where the commonly held companies will account for 60 percent of total industry sales.

It all wraps up, Norris concludes, in an attractive package that will force manufacturers to take hard, comparative looks between the costs and contributions of an in-house distribution department and those of an outside distributor. The Andersen people contend that wholesaler-distributors will win more of these comparisons than they'll lose; hence, their growth at distribution's expense.

The only ray of light for in-house distribution personnel confronted with the Andersen report comes from an exploration of the methodology behind the study.

Over 60 percent of the 250-member panel consulted about the future of the wholesaler-distributor industry consisted of wholesaler-distributors themselves. Only 20 percent came from the manufacturing side.

In addition, the producers of the study made much of the fact that the "Delphi questionnaire methodology" was used when interviewing respondents. The Delphi method seeks to establish a consensus of opinion from among the panelists by asking them to reevaluate their opinions in light of the responses of others.

Given the makeup of this panel, however, it's not too far-fetched to contend that the wholesaler-distributors who comprised the majority could have been inclined from the start to paint a rosy future picture for themselves. And if that was indeed the case, it's hard to see how the use of the Delphi method would have tempered their enthusiasm in any way. So, shippers may want to dismiss the entire study as one big love fest. Still, its suggestions can still serve as valuable thought-provokers about an area that undeniably is taking on increased importance in distribution.

Keeping down the overhead can mean the difference between operating in the black or in the red. Knowing what some of these costs will be can provide management with a road map to point them toward profitable sites for new operations or relocated old ones.

SITE LOCATION: State Taxes, Fees and Labor Costs

Journalists have a way with words that makes them look like authorities on just about every topic. Take Horace Greeley's now-famous advice: "Go west, young man." Such economy of expression and self-assured definitiveness make such advice tempting to follow. Don't you do it.

Not if you're responsible for selecting a site for a new facility into which to expand or begin a new business or related operations. Not without further consideration.

Greeley may have been able to turn a phrase, but what did he know about motor vehicle registrations? Did he know how expensive it can be to register a large fleet of trucks in some parts of the country? How about fuel taxes? Are fuel tax rates lower in the West, and if so are potential savings offset by higher energy costs?

Chances are Greeley didn't take these factors into consideration. Chances also are that at least some business planners today overlook some of the very same considerations. The matrix chart on the following pages compares some of the taxes, fees and other expenses assessed by each of the 48 contiguous United States. Factors of immediate impact on distribution and warehousing, like fuel and inventory taxes, are compared, as well as other economic factors that can contribute to the overhead costs of operating in any given state of the union.

The first column of the chart ranks the states according the most favorable general business climates, based on a study conducted by Alexander Grant & Co., Certified Public Accountants, and the Conference of State Manufacturers' Associations (COSMA). This ranking is based on a weighted average of many factors. It should be noted, then, that the weight given to each factor will vary according to the specific goals set by each company. For some, the cost of maintainng inventories may be paramount, for others it may represent a nominal fraction of total operating costs. So we consider the first to be the least important column of the chart, and prefer to leave the importance of each of the remaining columns up to the reader.

By the way, as you may have guessed, the figures shown in this chart would probably have prompted Greeley, if he were alive today, to say: "Go South."

continued

	Alexander Grant Overall Rating[1]	Average Hourly Manufacturing Wage[2,3]	Non-Agricultural Labor Union Membership[3,4]	Fuel & Energy Costs/ Million BTUs ($)[2]	State & Local Gov't. Debt/Capita[2,5]	Motor Fuel Tax[6,7]	VEHICLE REGISTRATION FEES[6,8]	
							Single Unit: Basis of Fee	Typical Cost
ALABAMA	23	7.01 30	21.8 11.38	3.75	1,183 1,049	11.0 12.0	Gross weight groups	45.50
ARIZONA	7	7.95 32	16.0 11.11	3.18	1,966 1,748	9.6 9.6	Flat fee + gross weight	322.62
ARKANSAS	18	6.26 33	16.0 9.09	2.85	1,018 883	9.5 10.5	Gross weight groups	91.00
CALIFORNIA	26	8.56 33	27.0 6.25	4.08	1,109 1,023	7.0 7.0	Flat fee + weight fee	147.00
COLORADO	15	8.22 32	18.1 0.00	2.78	1,541 1,316	9.0 9.0	Empty weight	107.75
CONNECTICUT	38	7.67 29	23.0 12.88	5.30	2,065 1,862	11.0 11.0	Gross weight	91.00
DELAWARE	41	8.27 26	25.2 5.44	4.12	2,947 2,726	11.0 11.0	Gross weight	66.80
FLORIDA	1	6.53 29	11.8 10.61	3.85	1,290 1,075	8.0 8.0	Flat fee + empty weight	83.75
GEORGIA	6	6.37 31	15.1 4.43	3.64	1,259 1,136	7.5 7.5	Gross weight	8.00
IDAHO	11	8.23 26	18.4 3.66	2.79	831 712	11.5 11.5	Gross weight groups	30.60
ILLINOIS	42	8.91 32	30.4 8.98	3.69	1,444 1,338	7.5 7.5	Flat fee + gross weight	130.00
INDIANA	29	9.37 31	30.4 4.70	3.34	798 715	10.5 10.5	Factory price groups	100.75

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[1] Alexander Grant & Co. prepares annually a study of general manufacturing business climates in cooperation with the Conference of State Manufacturers' Associations. The 48 contiguous states are ranked on 22 separate factors and on a composite of all the factors. Rankings are arranged both nationally and regionally. The rankings shown are obtained from the 1982 report.

[2] Obtained from the 1982 Alexander Grant & Company's Fourth Study of General Manufacturing Business Climates

[3] The first figure indicates average wage in dollars/hour. The second figure represents the increase in wages over the previous year (1981) as a percentage.

[4] The first figure is the percentage of unionized workers. The other number indicates as a percentage the change in union membership between 1981 and 1982. In all but five states membership decreased; thus the figures shown are generally negative values. Numbers representing increases in labor union membership are shown in italics.

[5] This column indicates the likelihood of future tax increases. The first number is the debt per capita, in dollars, in 1982. The second number is the figure at the conclusion of 1981.

[6] The source for these columns is the U.S. Department of Transportation, Federal Highway Administration report "Highway Tax and Fees: How They Are Collected and Distributed." The most recent available version of this annual report was used, containing figures dating from January 1981.

[7] These figures represent the state taxes on the use of gasoline and diesel fuel respectively, in cents per gallon.

[8] This series of columns indicates the typical costs of establishing a motor vehicle or fleet in each state. The primary factors or variables which determine the cost of vehicle registrations are identified in the first column. (In some states additional miscellaneous fees such as license plate and reflector fees are added on.) The next column represents the registration fee for a typical vehicle or configuration.

Tractor/Trailer Combination[8] Basis of Fee: Tractor	Tractor/Trailer Combination[8] Basis of Fee: Trailer	Typical Combined Costs[9]	State Corporate Income Tax (%)[10]	Property Taxation of Inventories	Unemployment Costs[2,12]	Worker Profile[2,13]	
Gross weight	Flat fee	151.00 346.00	5.00	exempt	122 115 3.23	0.165 3.23 56.7	**ALABAMA**
Flat fee + Gross weight	Flat fee + gross value	160.00 230.00	2.50 10.50 7	exempt	41 294 4.96	0.265 4.29 72.3	**ARIZONA**
Gross weight of combination	Flat fee	442.00 1044.00	1.00 6.00 5	avg. value	112 1 4.24	0.060 3.48 54.9	**ARKANSAS**
Flat fee + weight fee	Flat fee + unladen weight	449.00 1081.00	9.60	exempt	109 346 6.71	0.205 4.14 73.6	**CALIFORNIA**
Empty weight	Flat fee	33.00 33.00	5.00	5% of value	55 143 4.01	0.135 4.07 78.1	**COLORADO**
Gross weight of combination	Flat fee	420.00 740.00	10.00	exempt	101 -235 7.80	0.230 3.82 70.5	**CONNECTICUT**
Gross weight	Gross weight	196.00 362.40	8.70	no tax levied	155 -151 4.97	0.065 4.31 67.8	**DELAWARE**
Gross weight of combination	Flat fee	314.50 474.50	5.00	exempt	41 243 3.97	0.035 4.09 67.2	**FLORIDA**
Gross weight	Flat fee	38.00 108.00	6.00	as other prprty	74 269 3.78	0.055 3.64 56.5	**GEORGIA**
Gross weight of combination	Flat fee	238.80 135.00	6.50	exempt	136 374 3.82	0.070 3.69 72.8	**IDAHO**
Flat fee + gross weight	No fee	842.00 1495.00	6.50	no tax levied	169 -117 3.16	0.275 3.77 65.0	**ILLINIOS**
Gross weight of combination	Flat fee	180.50 625.50	6.00	avg. value	79 232 1.13	0.325 3.24 65.9	**INDIANA**

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[9] In this column, the initial amount applies to 3-axle configurations; the second, to 5-axle configurations.

[10] Where more than one number is indicated, the first represents a minimum rate; the second, the maximum rate payable and the third, the number of incremental rates in total. The tax rate payable by any individual company is based on its annual income. Italics indicate that additional taxes, exemptions or limits—beyond the scope of this chart—are imposed. Source is Political Research, Inc. (Figures as of January, 1982)

[11] This column describes the general basis of assessing property taxes on inventories. The entries indicate whether: inventories are exempt from property taxes; inventory taxes are higher, lower or the same as other property tax levels; or if inventories are taxed on an average value basis. Some states do not levy property taxes. Specific tax rates are indicated where available. The descriptions indicate the general intent of the tax laws; some states' taxes and exemptions vary for certain commodities or types of businesses. These are printed in italics. Source is **State Tax Guide,** Commerce Clearing House, Inc., ©1983.

[12] The first figure in this column indicates average unemployment compensation benefits paid per covered worker per year. This reflects the potential for changes in future unemployment insurance taxes. The following number is the net balance in the state's unemployment compensation trust fund, and also indicates the potential for unemployment insurance tax changes for the employer. The final number represents the average workers' compensation insurance rate per $100 of payroll (of selected occupations). This affects the cost of workers' compensation insurance.

[13] Three demographic indicators of the local labor force are represented in the final column. The first figure shows the average percentage of manhours lost through work stoppages over two years. The second number shows the value (in dollars) added by manufacturing employees per dollar of production payroll. This shows the cost-to-productivity ratio. The third figure is the percentage of adults over 25 years of age who have completed four years of college, indicating the size of the available, trainable work force.

	Alexander Grant Overall Rating[1]	Average Hourly Manufacturing Wage[2,3]	Non-Agricultural Labor Union Membership[3,4]	Fuel & Energy Costs/ Million BTUs ($)[2]	State & Local Gov't. Debt/Capita[2,5]	Motor Fuel Tax[6,7]	VEHICLE REGISTRATION FEES[6,8]	
							Single Unit: Basis of Fee	Typical Cost
IOWA	35	9.60 37	22.2 1.77	3.11	821 788	13.0 13.5	Gross weight groups	110.00
KANSAS	10	8.05 36	15.4 2.53	2.73	1,684 1,387	8.0 10.0	Gross weight groups	75.00
KENTUCKY	30	7.86 26	24.0 5.51	3.92	2,042 2,027	10.1 10.1	Gross weight groups	31.00
LOUISIANA	12	8.58 34	16.4 2.96	1.90	2,060 1,686	8.0 8.0	Gross weight per mile	100.00
MAINE	40	6.66 36	24.1 2.43	3.51	1,284 1,190	9.0 9.0	Gross weight groups	70.00
MARYLAND	27	8.39 30	22.8 8.80	3.58	2,005 1,779	9.0 9.0	Chassis weight groups	49.00
MASSACHUSETTS	33	7.01 27	24.9 10.11	5.03	1,873 1,784	11.2 11.2	Gross weight	[illegible]5.00
MICHIGAN	48	10.53 30	37.3 3.12	3.67	1,265 1,201	11.0 11.0	Gross weight groups	243.00
MINNESOTA	32	8.40 30	26.2 5.07	3.32	1,942 2,129	13.0 13.0	Gross weight & age groups	62.00
MISSISSIPPI	9	6.01 32	16.2 8.00	2.95	858 845	9.0 10.0	Gross weight + tag fee	65.75
MISSOURI	19	7.90 27	27.6 10.97	3.18	926 860	7.0 7.0	Gross weight groups	50.50
MONTANA	25	9.03 16	29.2 2.34	2.10	1,518 1,083	9.0 11.0	Flat fee + gross weight	34.50
NEBRASKA	8	8.02 38	18.1 6.22	2.64	3,019 2,933	13.9 13.9	Gross weight	86.50
NEVADA	16	8.42 29	23.8 12.18	3.29	1,747 1,645	10.5 10.5	Empty weight	43.00
NEW HAMPSHIRE	21	6.41 30	15.8 6.51	4.34	1,608 1,406	14.0 14.0	Gross weight	88.60
NEW JERSEY	34	7.91 26	25.7 5.86	4.45	1,930 1,713	8.0 8.0	Gross weight	126.50
NEW MEXICO	31	6.53 36	19.0 28.38	3.47	2,067 1,456	9.0 9.0	Gross weight groups	52.50
NEW YORK	45	7.84 29	38.8 5.37	4.00	2,687 2,648	8.0 10.5	Gross weight	70.00

SITE LOCATION

Tractor/Trailer Combination[6] Basis of Fee: Tractor	Tractor/Trailer Combination[6] Basis of Fee: Trailer	Typical Combined Costs[9]	State Corporate Income Tax (%)[10]	Property Taxation of Inventories	Unemployment Costs[2,12]	Worker Profile[2,13]	
Gross weight of combination	Flat fee	685.00 1520.00	6.00 10.00 3	avg. value	122 179 2.56	0.145 4.05 71.2	IOWA
Gross weight of combination	Gross weight groups	385.00 1200.00	4.50	avg. value	81 333 3.44	0.040 3.76 72.3	KANSAS
Gross weight of combination	Flat fee	495.50 771.50	3.00 6.00 4	as other prprty	154 169 2.36	0.205 4.19 51.9	KENTUCKY
Gross weight per axle	Flat fee	290.00 490.00	4.00	avg. value	117 199 4.73	0.110 5.03 58.0	LOUISIANA
Gross weight of combination	Flat fee	380.00 700.00	4.95 6.93 2	exempt	140 0 5.95	0.085 3.07 68.5	MAINE
Gross weight of combination	Flat fee	295.00 555.00	7.00	avg. value	97 230 5.57	0.065 3.49 66.7	MARYLAND
Gross weight of combination	Flat fee	310.00 534.00	9.50	exempt	122 64 5.66	0.070 3.94 72.7	MASSACHUSETTS
Gross weight of combination	Empty weight	460.00 798.00		exempt	212 40 6.15	0.185 2.94 68.2	MICHIGAN
Gross weight of combination	Flat fee	600.50 1330.50	12.00	exempt	100 52 7.28	0.130 3.92 72.4	MINNESOTA
Gross weight of combination	Flat fee + tag fee	283.50 608.50	3.00 4.00 2	exempt	70 362 2.30	0.085 3.68 55.1	MISSISSIPPI
Gross weight of combination	Flat fee	383.00 1258.00	5.00	exempt	94 188 2.23	0.170 3.97 63.7	MISSOURI
Flat fee + gross weight	Flat fee + gross weight	124.00 774.00	6.75	exempt	138 74 6.06	0.100 3.19 75.4	MONTANA
Gross weight of combination	Flat fee	414.00 814.00	3.75 4⅛ 2	exempt	52 178 2.28	0.030 4.13 73.8	NEBRASKA
Empty weight	Empty weight	173.00 167.00		exempt	104 293 4.77	0.095 4.68 75.5	NEVADA
Gross weight of combination	No fee	296.00 532.80	9.08	exempt	54 269 4.13	0.055 3.57 72.0	NEW HAMPSHIRE
Gross weight of combination	Flat fee	365.50 637.50	9.00	exempt	230 -211 5.50	0.012 4.17 67.8	NEW JERSEY
Gross weight of combination	Flat fee	50.50 75.50	4.00 6.00 3	exempt	69 248 5.87	0.055 4.02 68.2	NEW MEXICO
Gross weight of combination	Flat fee	295.00 519.00	10.00	no tax levied	166 75 3.94	0.095 4.29 66.2	NEW YORK

	Alexander Grant Overall Rating[1]	Average Hourly Manufacturing Wage[2,3]	Non-Agricultural Labor Union Membership[3,4]	Fuel & Energy Costs/ Million BTUs ($)[2]	State & Local Gov't. Debt/Capita[2,5]	Motor Fuel Tax[6,7]	VEHICLE REGISTRATION FEES[6,8]	
							Single Unit: Basis of Fee	Typical Cost
NORTH CAROLINA	3	5.94 33	9.6 10.28	3.84	850 752	12.0 12.0	Gross weight	144.40
NORTH DAKOTA	4	7.12 28	17.1 11.86	2.18	1,253 1,265	8.0 8.0	Gross weight & age groups	47.00
OHIO	44	9.53 31	31.3 6.85	3.54	1,044 971	10.3 10.3	Empty weight	126.00
OKLAHOMA	24	8.20 41	15.3 11.56	2.59	1,276 1,115	6.58 6.50	Gross weight & age	98.10
OREGON	43	9.43 30	26.1 11.53	3.05	3,170 2,668	8.0 8.0	Gross weight groups	45.00
PENNSYLVANIA	46	8.30 30	34.6 7.24	3.55	1,638 1,718	11.0 11.0	Gross weight	132.00
RHODE ISLAND	47	6.10 30	28.3 5.35	5.37	2,429 2,142	12.0 12.0	Gross weight groups	62.00
SOUTH CAROLINA	5	6.18 33	7.8 12.36	5.54	1,307 1,073	13.0 13.0	Gross weight groups	63.00
SOUTH DAKOTA	14	7.12 37	14.8 0.68	2.42	1,635 1,643	13.0 13.0	Shipping weight groups & age	60.00
TENNESSEE	13	6.72 31	19.3 8.10	3.63	1,423 1,316	9.0 12.0	Gross weight groups	62.50
TEXAS	2	7.95 35	11.4 14.29	2.64	1,582 1,452	5.0 6.5	Gross weight groups	96.82
UTAH	20	7.73 36	17.7 9.69	2.70	1,486 968	11.0 11.0	Gross weight groups	35.00
VERMONT	28	6.79 33	18.0 21.05	4.80	1,669 1,544	11.0	Gross weight groups	172.00
VIRGINIA	17	6.81 33	15.0 1.96	3.45	1,169 1,097	11.0 11.0	Flat fee + gross weight	32.40
WASHINGTON	37	10.44 38	34.4 5.75	2.37	3,205 2,815	13.5 13.5	Flat fee + gross weight	65.00
WEST VIRGINIA	39	8.80 32	34.4 14.85	2.75	1,897 1,665	10.5 10.5	Gross weight groups	58.00
WISCONSIN	36	8.80 32	28.5 6.56	3.50	1,298 1,206	13.5 13.5	Gross weight groups	168.00
WYOMING	22	7.88 28	18.9 4.06	2.35	3,240 2,477	8.0	Gross weight groups	60.00

SITE LOCATION

Tractor/Trailer Combination[6] Basis of Fee: Tractor	Tractor/Trailer Combination[6] Basis of Fee: Trailer	Typical Combined Costs[9]	State Corporate Income Tax (%)[10]	Property Taxation of Inventories	Unemployment Costs[2,12]	Worker Profile[2,13]	
Gross weight of combination	Flat fee	473.00 841.00	6.00	lower % than prprty	58 295 2.23	0.030 3.65 55.3	NORTH CAROLINA
Gross weight of combination	Flat fee	446.00 1016.00	2.00 7.00 6	exempt	135 129 3.84	0.015 4.38 66.5	NORTH DAKOTA
Empty weight	Empty weight	336.00 663.00	*4.60* *8.70* *2*	*35% of value*	142 147 2.61	0.270 3.34 67.4	OHIO
Gross weight groups & age	Flat fee	400.25 655.25	4.00	avg. value	45 192 4.89	0.075 3.87 66.7	OKLAHOMA
Gross weight groups & age	Gross weight groups	105.00 185.00	*7.50*	exempt	128 396 11.05	0.085 3.23 74.7	OREGON
Gross weight of combination	Flat fee but weight when <10,000 lbs	243.00 369.00	10.50	no tax levied	213 -288 3.84	0.205 3.36 64.5	PENNSYLVANIA
Gross weight of combination	Flat fee	225.00 410.00	*8.00*	*exempt*	189 -304 7.54	0.140 3.32 60.7	RHODE ISLAND
Gross vehicle weight	Flat fee	276.50 586.50	6.00	*6% of value*	72 213 2.60	0.020 3.22 54.0	SOUTH CAROLINA
Empty weight & age	Empty weight & age	185.00 415.00		as other prprty	59 96 2.10	0.045 3.57 68.5	SOUTH DAKOTA
Gross weight of combination	Flat fee	610.00 1010.00	6.00	exempt	99 186 2.92	0.160 3.62 55.4	TENNESSEE
Gross weight of combination	Flat fee	315.60 735.60		as other prprty	35 86 5.61	0.105 4.72 61.4	TEXAS
Gross weight groups	Flat fee	250.00 510.00	*4.00*	exempt	98 173 2.84	0.155 3.76 80.3	UTAH
Gross weight of combination	Flat fee	516.90 1869.10	5.00 *7.50* *4*	*exempt*	129 -142 2.22	0.055 3.90 70.5	VERMONT
Flat fee + Gross weight combination	Flat fee	212.00 540.60	6.00	as other prprty	58 65 3.10	0.070 3.70 62.5	VIRGINIA
Flat fee + gross weight	Flat fee + gross weight	329.00 540.60		exempt	113 59 3.12	0.220 3.66 77.0	WASHINGTON
Gross weight of combination	Flat fee	308.50 628.50	6.00	as other prprty	201 78 2.17	0.270 3.47 56.6	WEST VIRGINIA
Gross weight of combination	Flat fee	628.00 1176.00	7.90	exempt	143 305 2.88	0.195 3.49 70.0	WISCONSIN
Empty weight groups	Empty weight groups	120.00 120.00		exempt	52 448 5.36	0.110 5.27 77.8	WYOMING

Chilton's

DISTRIBUTION

JUNE 1983

FOR TRAFFIC & TRANSPORTATION DECISION MAKERS

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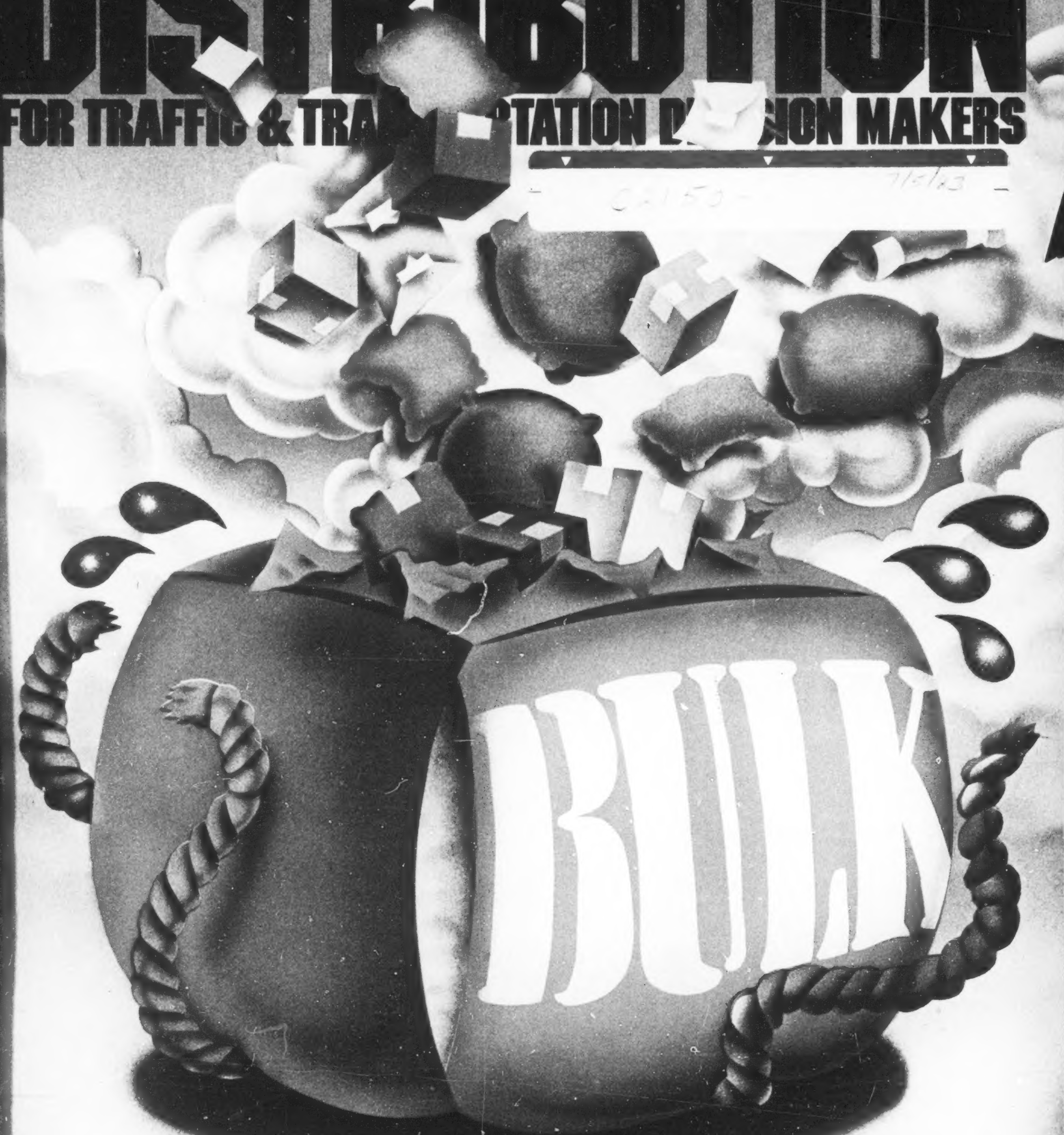

BULK...BUSTING OUT ALL OVER

Financial Profile of Motor Carriers • Air Freight Cargo Liability

Are You Using Security Seals Properly? • Resource Management: A New Future for Logistics

VOLUME 82, NUMBER 6
JUNE 1983

Chilton's DISTRIBUTION

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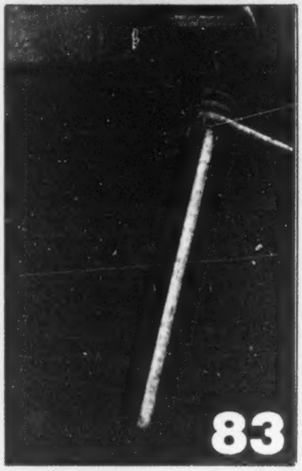

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On the Cover: The wrapping is being blown off of this neatly packaged world by shippers who realize that sometimes the good old ways are still the best.

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DIALOGUE

OWNER OPERATORS: A BANE OR A BOON, DEPENDING ON YOUR VIEWPOINT

"We currently use O-Os on much of our truckload traffic, and we will continue to do so as long as they are on lease to an established transportation company. This provides us with both a reasonable rate structure and adequate insurance protection of our freight."—**William A. Osborne, traffic manager, Lincoln Pulp & Paper Co., Inc., Lincoln, Me.**

"I expect to use O-Os less than we have for the past 16 years. Their reliability and professionalism has steadily gone down hill. General commodity carriers are more willing to look into lower rates and to adjust to changes in more and improved service than the O-Os."—**D.G. Schoenrock, traffic supervisor, Rockwell International, Winchester, Ky.**

"O-Os are probably the worst of all alternatives. They pick up when they want to, deliver when they want to, and pay freight claims whenever hell freezes over."—**Frank D. Vander Horst, regional distribution manager, The Coca-Cola Co. Foods Division, Paw Paw, Mich.**

"We need the O-Os because our consolidated truckloads of LTL sometimes fall into a catagory where regulated common carriers cannot handle them as efficiently or speedily as an O-O. There is a place for the O-O in our distribution system, as long as they can perform up to our service requirements."—**Larry Green, traffic manager, Rival Manufacturing Co., Kansas City, Mo.**

"We use O-Os that are leased to reliable specialized carriers. They must produce copies of their cargo liability insurance before they are approved. Short haul or long haul, they reduce marking/tagging costs, loading costs, loss and damage, and they usually have lower rates. Our valves, 10,000# up, move on O-Os most of the time."—**R.E. McAlister, traffic manager, Cameron Iron Works, Ball Valve Div., Sealy, Tx.**

"I expect to use O-Os when I do not have a choice. The recent strike shows how inept they are. I relied on them before, but when the strike came, it was like dealing with another person.—**M. Miyar, regional distribution manager, Universal Foods, Franklin Park, Ill.**

"I am presently, and will in the future, use O-Os for about 95 percent of my total freight. I would like to see more of them get into pool distribution."—**R.J. Mitchell, distribution manager, Kelly & Cohen, Pittsburgh, Pa.**

"I expect to use O-Os, preferably under long-term lease to a well-managed irregular route common carrier. The O-Os are filtered and only the best are retained. Direct use of O-Os opens too many doors of liability, and low cost doesn't mean the best for your company.—

continued on pg. 8

QUESTION OF THE MONTH

Truck taxation is still a wild controversy. We'd like to know what changes, if any, should be made to both federal and state truck taxes.

A study is going on right now that includes six alternatives to the truck tax provisions of the recently enacted Surface Transportation Assistance Act. Briefly, these options are:

1) Keep the fuel tax and excise taxes as they are, but increase weight breaks and fees for all truck registrations;

2) The same as (1), but prorate registration fees depending on mileage driven;

3) The same as (1) except that only trucks over 75,000 lbs. would pay higher fees;

4) The same as (1) except that fees would be based on both the weight and distance (ton miles) a truck travels;

5) Increase only the nine-cent-per-gallon fuel tax, and only for heavy trucks (probably those over 55,000 pounds);

6) Increase the nine-cent-per-gallon fuel tax for all trucks.

Because so many states have suddenly boosted their taxes, truckers have suggested that there be uniform state taxes, a 50-state license for interstate carriers and similar options. All these tax options have an impact on you, so turn to the Dialogue card and give us your ideas. ☐

SURVEY RESULTS

The shutdown hurt owner-operators. As you can see, 89 percent of the responses noted that. But that figure is a little misleading. Of all the responses that we received with that question answered, close to 100 percent said the independents were hurt. The remaining 11 percent didn't answer the question, although one card said the shutdown helped. The least mentioned advantage to using O-Os was reliable service; only 16 percent noted it. Of the disadvantages, the potential for theft/damage was mentioned least.

OWNER OPERATOR

Shutdown hurt	89%
O-Os best for Special Commodities TL	84%
Next best for Contract Carriage	71%
Least suited for LTL	79%
Or for COFC/TOFC Drayage	41%
Advantages in Low Costs	87%
Also in Speed	83%
But, lack Professionalism	61%
And, aren't reliable	58%

Edward L. Mattes, manager domestic transportation, J.M. Huber Corp., Edison, N.J.

"We ship volume to all parts of the U.S. Many times, to newly constructed or under construction facilities. We find the transit speed and low cost of owner operators helps us to compete with our more centrally located competitors."—**John Satterfield, traffic coordinator, Kingston-Warren Corp., Newfields, N.H.**

"As an LTL shipper, I don't see O-Os fitting into our shipping picture. However, should we gain TL customers, the possibilities do exist—if they can compete with TOFC rates, service and reliability.—**R.J. Marshall Jr., traffic manager, Duraco Products, Inc., Streamwood, Ill.**

"Until they stop thinking of themselves as cowboys of the old west, I intend to use O-Os only as a last resort. I only need them to move over-size machinary."—**William L. Schalm, shipping foreman, Armstrong Blum Mfg. Co., Chicago, Ill.**

"I expect to use O-Os only if they are connected with a major company which can assume all liabilities. We do this now without any problems, but we also request a certificate of insurance, financial statement, tariffs and ICC or PUC authorities from all carriers."—**Bill Putnam, traffic manager, F. Korbel & Co., Guerneville, Calif.**

"I expect to use O-Os for transcontinental perishables, provided that rate levels can remain competitive with TOFC."—**R.L. Bulger, vice president order processing, Harry and David, Medford, Ore.**

"We will not be using owner-operators. While most of our shipments are LTL, we sell $25 million in archery equipment each year, the risk is just too great. Also, the strike hurt what chances they had with us."—**C.E. Bonamie, traffic manager, Bear Archery, Gainesville, Fla.**

"I expect to use O-Os for low volume service where flexibility is needed."—**William A. Guthrie, mail and traffic manager, Time-Life Books, Inc., Alexandria, Va.**

"I expect to use O-Os to haul produce within a 600 mile radius of Chicago."—**M. Radak, operations manager, Transamerica Distribution, Chicago, Ill.**

"Our company will continue to use O-Os for container drayage and applications where close supervision by ourselves is available at no additional cost."—**Unsigned.**

"Personally, at this stage, I would not not directly employ owner-operators. This is not because they can't handle our product, in fact, most of our carriers use them, but rather because of liability problems."—**Anthony Guzzardo, manager manufacturing services, Dorr Oliver Inc., Hazelton, Pa.**

"Only in a situation where individual assurances of the O-O present overwhelming proof of benefits. I strongly resent the high-handed tactics used during the strike."—**K.W. Waldrip, planning manager, Kendahl, Seneca, S.C.**

"We are a major TL shipper of exempt, time-sensitive freight. I refuse to use an O-O because he does not have the money to immediately repower a unit when a mechanical failure occurs. I also need someone I can hold responsible, and who is available 24 hours a day."—**H.N., RRD, Warsaw, Ind.**

I am a little disappointed at some of the statements made by you pertaining to independent truckers in your editorial in the March issue of DISTRIBUTION.

You see, I was an independent trucker. Not an owner, but a driver for people who wanted to have something they could call their own. I worked for a few of these independent operators for 12 years, and I thoroughly enjoyed every day of those years.

I don't totally agree that Michael Parkhurst is the self-appointed leader of the independent truckers. If my memory serves me right, Mike was once an independent trucker himself. I have not always agreed with Mike, but I must praise him for having the courage to stand up in the land of giants and speak out for a cause that he and thousands of other little men believe is right. I believe that he became the leader because he made his views known to the thousands of independent operators through the magazine OVERDRIVE, which he started and published. I believe he was encouraged and asked by a majority of these thousands of courageous independents to represent them.

I did not see all of Mike's television newsbriefs, but on those that I did see, he was not ranting or raving.

Yes, I believe as you that the real losers were the drivers and owners, and I agree that the owner operators did suffer a black eye. But how long does a black eye last?

During the years that I was an independent driver and the so-called legitimate common carriers were going through strikes, I recall an incident in Youngstown, Ohio where an independent trucker was murdered, another in Cleveland, Ohio where an independent trucker's rig was almost destroyed by human beings with axes, another in north Lima, Ohio. . . .

Many of Mr. Henderson's [Richard Henderson, executive vice-president of the Private Truck Council of America] statements could be discussed and debated at some length. The one that I look at says: "presumably, when these taxes are collected, they will go to improve our deteriorating highways and bridges, which will repay the truckers in saved time and lower maintanence costs."

Ah, yes, presumably these tax dollars will go to improve our highways and bridges. I believe that both sets of people, independents and common carriers alike, want some real assurances that this money will go to improve the quality of material and work that goes into these roadways so they will last until paid for, and with a minimum of maintanence.

I don't think that you or I or Mr. Henderson can fully understand the feelings that made the independents take the actions they took. After all, we have been working with very little risk during this recession.

In evaluating whether or not independents can still be used in my particular distribution system, the answer is definitely yes. The men I deal with are highly qualified and have acted in a very professional manner. Service has been excellent, and I will continue to use their services.

Donald W. Cox
Mt. Morris, Ill.

FORECAST

BY DR. RICHARD LANCIONI

GROWTH WITHOUT INFLATION

The performance of the economy continues to be strong through the second quarter of 1983. All of the news regarding the recovery is positive, especially the trend in inflation, which is currently running at a level of 3.3 percent. Economists both in and out of Washington seem to agree that 1983 will be a robust one in terms of recovery and one that has not been matched since 1955 when the economy grew without the threat of inflation. Economists sometimes refer to this as disinflation or a period when growth can occur without pressure on prices. The U.S. economy is in a particularly favorable position for the next two years in this regard for many contracts that were negotiated in 1982 were based on wage concessions and give backs.

This is important for distribution managers for they can begin to plan for a period of stable shipment growth and gradual improvement in customer service levels. As one distribution manager stated, "My job has become impossible over the past year. All top management wants me to do is cut costs! There is more to distribution than cost savings. I hope the cost reduction pressure will be off and I will be allowed to do my job correctly. Distribution's role is to service customers and I can only do this if I have facilities support."

This cautious approach by management is reflected in the most recent report on inventory-to-sales ratios issued by the American Production & Inventory Control Society (APICS).

The miniscule 0.3 percent increase in new orders for durable goods in March provides further evidence that while the recovery has indeed arrived, it is proceeding much more sluggishly than usual, according to Michael K. Evans, consulting economist to APICS. While the $0.8 billion increase in orders for nondefense capital goods was welcome news, Evans points out that it was more than offset by the $1.3 billion decline in orders for primary metals, which had been a star performer in the previous three months. ☐

DISTRIBUTION INDEX FORECAST INDICATORS

	May.83	Jun.83	Jul.83	Point change from Previous Period
Truck Shipments:	115.6	116.3	117.9	+1.6
Rail Shipments:	105.1	107.2	109.7	+2.5
Air Shipments:	113.3	113.8	114.1	+0.3
Water Shipments:	105.9	106.2	106.9	+0.7
Whse Space Utilization:	113.2	113.7	114.2	+0.5
Inventory Valuation:	101.9	101.3	100.6	−0.7
Cumulative Index:	112.3	112.9	113.8	+0.9

(Base year is 1976 where all shipment levels were indexed at 100)

The Distribution Index elements for the month of June, 1983 continue to reflect the strong upturn in the economy. All areas of the Index were in the positive direction. Truck shipments reached their highest level since October, 1982 rising to a level 117.9 through July. This represents an increase of 1.6 over June, 1983. Rail shipments demonstrate the single largest increase in the Index rising to a level of 109.7 through July, up by 2.5 over the previous period. Air as well as water shipments are also increasing representing the general upward trend in the transportation sector. The most encouraging trend reflected in the Index is the continuing down trend in Inventory Valuation to a level of 100.6 through July. The decrease reflects the reduction in inflation to an average annual increase of less then 3 percent. Overall, the Cumulative Index will increase to 113.8 through July.

TRANSPORTATION INDICATORS—

Monthly/Quarterly Trends

Diesel Fuel Prices (Cents per Gallon/Average)
(Interstate Commerce Commission)

Mar.83	Apr.83	May.83	Aug.83 (Forecast)
1.13	1.12	1.16	1.17

Dow Jones Transportation Index (Index Point Closing)
(Wall Street Journal)

Mar.83	Apr.15	May.13	Aug.83 (Forecast)
506.0	529.9	547.9	565.9

Rail Freight Traffic (Billions of Ton Miles)

Mar.83	Apr.15	May.13	Cumulative Forecast
53.0	55.0	58.6	280

The trends in the distribution industry continue to provide managers with the optimism that is needed to improve their operations. The cost of truck transport will continue to hold at relatively constant levels as the rise in diesel fuel prices will be moderate through the third quarter. With the increase in government taxes, fuel prices per gallon will rise to only $1.16 a gallon through May, 1983. General optimism continues to abound in the Stock Market in the transportation sector, with the price of stocks in the industry rising steadily, and in some cases, rising faster than the blue chip stocks in the Market. The Transportation Index should continue to do well, rising to 565.9 through August, 1983. Rail freight traffic is also expected to increase to a level of 58.6 through May, 1983.

FINANCIAL PROFILE 1982

Motor Carriers

Shippers must look at more than the tariffs of the carriers they use. In this deregulated environment, carriers are now shippers' suppliers, and in some cases partners, on whom the success or failure of entire marketing and production strategies depends. Shippers have to know as much as they can about the carriers' economic viability, capital structure, reinvestment trends and other financial data. In this installment of FINANCIAL PROFILE 1982, we look at the motor carrier industry. In subsequent issues, we will look at the railroads, air freight companies, and water carriers.

BY THOMAS A. FOSTER, EDITOR-IN-CHIEF

When a shipper *analyzes* a motor carrier, it usually means the traffic or distribution manager looks over its tariff and rates, the route coverage and available service history.

The idea of *analyzing* a carrier's balance sheet and operating statement just doesn't occur to most shippers. After all, the shipper just wants to use the carrier, not buy it.

But times have changed, and the way shippers analyze their carriers must change, too. The first question a shipper should ask himself is no longer, "Who has the best rates and service today?" The first question should be, "Who's going to be in business tomorrow?"

The trucking industry's financial performance in 1982 certainly brings this point home to all shippers. Last year was the worst in history for the motor carrier industry. According to the American Trucking Associations (ATA), the average operating ratio in 1982 was 98.29, and the average profit margin was a shocking 0.5 percent. More than 200 fairly large motor carriers went out of business, often abruptly. Countless other small carriers disappeared without a trace.

Even for those carriers who made enough money to stay in business, the industry's financial figures should cause shippers to ask several other penetrating questions:

Who is making enough money to reinvest in new equipment in the future? Who is biting the bullet and reinvesting right now? Which carriers are making a profit, but are being sapped of their much-needed capital by a parent company?

Fortunately for the shipper, the answers to these questions can be found by carefully reviewing key financial data.

The Interstate Commerce Commission still gathers such data on all Class I & II motor carriers. On the following pages, we have summarized available 1982 figures reported to the ICC for the largest motor carriers (see pages 60-66).

The ATA provides detailed financial figures and ratios in its annual *Financial Analysis of the Motor Carrier Industry*. The data is reported for segments of the industry, not for individual carriers. The information in the report also is a year out of date when it is published (see page 60).

For the 20 or more carriers whose shares are publicly traded, highly detailed financial information is available in annual reports and other easily obtained documents.

A shipper can also simply ask a carrier for pertinent financial data.

Whatever your source of financial information, even a quick review shows an important, and paradoxical, trend for shippers.

While the industry as a whole is having serious financial problems, a small group of carriers is bucking the trend and reporting excellent returns.

The industry as a whole is not only having profit problems, but it is also disinvesting.

"The trucking industry has gone from from a 17 percent return on equity business in 1978 to a business that showed two percent or less ROE in 1982," says William M. Legg, a financial analyst with the Baltimore-based stock brokerage firm, Alex Brown & Sons. "At the same time, the industry's net property plant and equipment account

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MOTOR CARRIER INDUSTRY SELECTED FINANCIAL INDICATORS

Carrier Groups A, B & C	1981	1980
Depreciation (% of Rev.)	3.7	3.8
Net Income (% of Rev.)	2.2	0.9
Reserve for Depreciation (% of Assets)	46.8	43.4
Net Property (% of Assets)	50.8	50.8
Return on Transportation Investment	11.1	15.0
Operating Ratio	97.3	96.11
Funded Debt to Equity	0.41	0.44
Cash Throw to Funded Debt (% in one year)	336.1	487.8

Carrier Group D	1981	1980
Depreciation (% of Rev.)	3.7	3.8
Net Income (% of Rev.)	2.5	1.2
Reserve for Depreciation (% of Assets)	46.5	43.4
Net Property (% of Assets)	44.5	45.1
Return on Transportation Investment	18.4	19.4
Operating Ratio	96.3	95.8
Funded Debt to Equity	0.54	0.64
Cash Throw to Funded Debt (% in one year)	252.3	243.7

Carrier Group E	1981	1980
Depreciation (% of Rev.)	4.2	4.5
Net Income (% of Rev.)	2.4	2.8
Reserve for Depreciation (% of Assets)	41.8	37.5
Net Property (% of Assets)	51.3	51.8
Return on Transportation Investment	12.7	15.9
Operating Ratio	95.6	94.7
Funded Debt to Equity	0.39	0.49
Cash Throw to Funded Debt (% in one year)	506.9	754.1

The 1982 Financial Analysis of the Motor Carrier Industry, published by the American Trucking Associations, focuses on the financial performance of nearly 2,000 Class I and Class II carriers. These carriers are divided into groups in this report according to their size and type of business. Group A is made up of 354 general freight carriers with revenues less than $5 million. Group B is made up of 235 general freight carriers with revenues between $5 million and $25 million. Group C includes 115 general freight carriers with revenues over $25 million. Group D is made up of 1,247 special commodity carriers that are subgrouped according to principal commodity carried. Group E includes 20 general freight carriers whose stock is publicly traded. The report, which includes 50 pages of financial figures and analysis on various segments of the trucking industry, is available from the ATA's Finance & Administration Division, 1616 P St., N.W., Washington, DC 20036.

Source: 1982 Financial Analysis of the Motor Carrier Industry. American Trucking Associations

LARGE CLASS I MOTOR CARRIERS OF PROPERTY SELECTED EARNINGS DATA

DISTRICT, CARRIER & YEAR		OPERATING REVENUES ($millions)	NET CARRIER OPERATING INCOME[1] ($millions)	NET INCOME[2] ($millions)	REVENUE TONS HAULED[3]	OPERATING RATIO[4] (percent)	RETURN ON EQUITY LESS INTANGIBLE PROPERTY[5] (percent)
Eastern District Total(33)	1982	$6,199.3	$136.5	$85.0	63.0	97.8	6.18
	1981	6,356.9	224.1	147.6	72.3	96.5	11.98
Southern District Total(19)	1982	3,167.9	44.7	(5.2)	34.9	98.6	-0-
	1981	3,340.0	120.0	49.8	37.5	96.4	11.04
Western District Total(48)	1982	6,036.9	19.5	(15.4)	61.9	99.7	-0-
	1981	6,438.5	187.2	95.0	70.2	97.1	9.99
TOTAL ALL CARRIERS[6]	1982	15,404.3	200.8	64.3	159.8	98.7	2.19
	1981	16,135.4	531.4	292.5	180.1	96.7	11.10
INDIVIDUAL CARRIERS DATA							
Eastern District							
A-P-A Transport Corp.	1982	$81.4	$13.7	$6.1	0.4	83.1	29.20
	1981	73.7	11.6	5.4	0.4	84.2	20.76
Ace Doran Hauling &	1982	41.1	1.7	1.1	1.0	95.7	13.45
Rigging Co.	1981	55.7	1.3	0.7	1.5	97.6	10.31
Aero-Mayflower Transit Co.,	1982	202.2	5.2	3.5	0.3	97.4	19.62
Inc.	1981	199.6	3.9	2.5	0.3	98.0	16.94
Allied Van Lines, Inc.	1982	273.9	(0.7)	1.7	0.5	100.3	9.84
	1981	302.6	0.4	2.6	0.5	99.9	16.65
Associated Truck Lines, Inc.	1982	183.1	(2.5)	(1.4)	21.8	101.4	-0-
	1981	178.9	(1.7)	1.1	21.9	101.0	4.24

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FINANCIAL

is now about the same as it was five years ago. When you consider that inflation has been nearly 50 percent since 1978, that means there has been no new investment in equipment. There has actually been nearly a 50 percent reduction in usable, updated equipment.

"The life of an interstate tractor or truck is only about seven years," says Legg. "Carriers' operating statments should have depreciation expenses that gradually increase every year, with periodic jumps indicating large equipment purchases. The industry as a whole has not been able to do this in the last couple years. Many carriers have been living off their depreciation, and they can only do this for so long."

The time is coming very soon when the industry is going to have to make major replacements, according to Legg.

"The industry is going to go through a capital crisis in the next three or four years," says the financial analyst. "The average vehicle is five years old. It gets about four miles to the gallon and has substantial maintenance costs. Carriers want desparately to replace these aging vehicles. New tractors not only will get about 50 percent better fuel mileage, but since new highway taxes are based largely on fuel used, carrier taxes can be reduced with newer equipment.

"But as badly as carriers need to replace their equipment, few can afford it," says Legg. "Net profit margins, which is how much money is actually available for realloction at a company, are practically nonexistent for the industry as a whole."

According to Legg, one of the major problems for the industry has been that income has declined, yet interest expenses have increased. "In 1976, interest costs for the industry were $82.5 million versus operating income of $671.9 million for a ratio of about one to eight," says Legg. "In 1981, the interest costs rose to $207.6 million versus $444.5 million of operating income for a coverage ratio of about one to two. This is not the type of trend that encourages a banker [to lend more money]."

Shippers are largely unaware of this capital crisis, according to Legg. The time is not far off, however, when shippers will share the pain in terms of capacity shortages. Legg says there are three reasons for this impending crisis.

"First, a cyclical improvement in the economy will increase tonnage and reduce excess capacity," says the financial analyst. "Second, I firmly believe shippers will reduce their private fleets because of the lower rates and more responsive service offered by motor carriers. Most manufacturers would rather employ their capital in the manufacturing process if they can get comparable service and cost on a fully variable basis. Two-thirds of all trucking is done in private carriage, so it wouldn't take a major shift to have a significant impact on the common carrier.

"Third, the industry is reducing excess capacity internally through consolidation," says Legg. "Although the majority of the industry is, at best, only getting a marginal return on investment, there is a small group of carriers earning adequate returns, or better. These carriers have been expanding throughout the recession. They have excellent balance sheets and strong management teams, and they have been using their resources to pick up market share as others have ceased operation."

INDIVIDUAL CARRIERS

Shippers should be especially aware of these differences in carriers' financial performance because it will probably translate into ser-

continued

Atlas Van Lines, Inc.	1982	127.5	4.5	3.2	0.2	96.5	13.69
	1981	133.3	4.0	3.0	0.2	97.0	21.20
Bekins Van Lines Co.	1982	174.4	4.3	3.8	0.3	97.5	19.16
	1981	161.1	3.0	2.6	0.3	98.1	15.69
F.J. Boutell Driveaway Co., Inc.	1982	49.3	1.3	0.1	0.4	97.3	0.90
	1981	50.9	2.3	1.2	0.4	95.4	13.14
Branch Motor Express Co.	1982	128.8	(7.9)	(10.7)	1.2	106.1	-0-
	1981	149.5	(6.9)	(6.5)	1.5	104.6	-0-
Central Transport, Inc.	1982	136.9	2.2	3.2	3.3	98.4	39.15
	1981	119.6	(2.9)	(1.2)	3.2	102.5	-0-
Chemical Leaman Tank Lines, Inc.	1982	151.7	(0.4)	(2.5)	5.3	100.3	-0-
	1981	177.0	6.7	(0.1)	6.1	96.2	-0-
Coastal Tank Lines	1982	66.3	(0.7)	(3.4)	3.0	101.4	-0-
	1981	80.1	4.3	0.8	4.8	94.6	6.49
Commercial Carriers, Inc.	1982	96.0	3.3	3.4	1.7	96.6	15.90
	1981	94.7	4.2	2.2	1.9	95.6	12.13
Commercial Lovelace Motor Freight, Inc.	1982	71.1	(7.6)	(5.3)	0.6	110.7	-0-
	1981	84.6	(4.8)	(3.9)	0.8	105.7	-0-
Duff Truck Line, Inc.	1982	53.1	(1.0)	(1.8)	0.6	102.0	-0-
	1981	57.4	0.6	(0.2)	0.8	98.9	-0-
Hall's Motor Transit Co.[7]	1982	215.3	(8.9)	(11.9)	1.8	104.1	-0-
	1981	247.7	(5.3)	(5.8)	2.8	102.1	-0-
Holland Motor Express, Inc.	1982	57.9	3.1	2.1	20.5	94.5	13.86
	1981	58.5	3.7	2.6	20.6	93.7	20.64
Holmes Transportation, Inc.	1982	54.2	(0.3)	(0.3)	20.6	100.6	-0-
	1981	56.8	1.4	1.0	20.6	97.5	9.47
IMFS, Inc.	1982	226.6	(13.6)	(16.2)	22.2	106.0	-0-
	1981	255.4	(7.0)	(2.8)	2.8	102.8	-0-
Jones Transfer Co.	1982	46.9	(1.5)	(2.3)	21.0	103.2	-0-
	1981	51.6	(0.8)	(0.8)	1.0	100.2	-0-
M & G Convoy, Inc.	1982	59.5	0.1	0.1	0.6	99.8	1.24
	1981	62.6	4.4	2.1	0.6	92.9	27.97
Matlack, Inc.	1982	156.1	2.8	(1.0)	6.8	98.2	-0-
	1981	200.1	17.7	7.8	9.2	91.1	19.93
National Freight, Inc.	1982	78.1	(1.0)	0.7	21.2	101.4	14.47
	1981	80.2	0.9	0.6	1.7	98.9	15.68
North American Van Lines, Inc.	1982	491.2	20.2	21.4	22.1	95.9	14.35
	1981	495.2	25.5	27.1	1.9	94.8	22.18
Nu-Car Carriers, Inc.	1982	79.1	1.9	(0.8)	21.5	97.6	-0-
	1981	70.2	3.5	0.6	1.2	95.0	24.55
Preston Trucking Co., Inc.	1982	218.0	6.1	5.1	22.0	97.2	7.34
	1981	194.1	7.9	5.6	2.1	95.9	8.63
R.W.Service System, Inc.	1982	50.7	(0.4)	(1.1)	21.7	101.0	-0-
	1981	75.4	0.5	0.5	2.4	99.2	7.00
Red Star Express Lines	1982	88.6	6.4	2.8	0.6	92.7	7.77
	1981	83.4	8.3	5.2	0.7	90.0	15.88
Refiners Transport & Terminal	1982	50.3	(0.2)	(2.0)	6.2	100.0	-0-
	1981	54.2	4.6	2.6	5.9	91.5	20.40
Roadway Express, Inc.	1982	1,147.4	83.5	74.2	24.8	92.7	17.79
	1981	1,129.9	91.9	71.3	24.9	91.9	20.35
St.Johnsbury Trucking Co., Inc.	1982	167.2	10.4	5.0	21.3	93.7	20.07
	1981	136.2	4.0	2.1	21.1	97.0	10.64
Smith's Transfer Corp.	1982	270.2	(4.3)	(3.0)	21.8	101.6	-0-
	1981	300.3	7.3	1.4	2.2	97.6	2.99
Yellow Freight System, Inc.	1982	903.5	16.4	10.3	24.1	98.2	4.76
	1981	884.8	28.2	15.8	4.4	96.8	8.07
TOTAL EASTERN CARRIERS(33)	*1982*	*6,199.3*	*136.5*	*85.0*	*63.0*	*97.8*	*6.18*
	1981	*6,356.9*	*224.1*	*147.6*	*72.3*	*96.5*	*11.98*

Southern District

Bowman Transportation, Inc.	1982	$127.2	($2.8)	($1.7)	21.4	102.2	-0-
	1981	160.1	2.2	0.8	1.8	98.6	1.70
Brown Transport Corp.	1982	137.7	7.5	5.4	21.8	94.5	41.56
	1981	143.0	9.6	7.3	2.00	93.2	45.99
Carolina Freight Carriers Corp.	1982	268.3	11.9	6.0	21.7	95.5	17.96
	1981	259.2	10.5	5.0	21.9	95.9	18.69
Georgia Highway Express, Inc.	1982	86.9	2.3	1.3	20.9	97.4	10.42
	1981	88.5	5.8	2.8	1.1	93.4	27.33
Gordons Transport, Inc.	1982	95.3	(1.8)	(4.3)	20.7	102.0	-0-
	1981	105.5	(0.4)	(3.4)	0.9	100.4	-0-
Ligon Specialized Haulers	1982	66.3	0.1	(0.8)	21.5	99.7	-0-
	1981	89.2	1.0	0.2	1.7	98.8	4.71
Mason & Dixon Lines, Inc.	1982	149.0	(8.4)	(10.7)	21.4	105.7	-0-
	1981	178.0	1.7	(0.8)	1.7	99.0	-0-
McLean Trucking Co.	1982	491.8	(22.3)	(20.4)	22.6	104.5	-0-
	1981	585.4	(8.0)	(7.7)	3.3	101.4	-0-
Melton Truck Lines, Inc.	1982	48.1	(0.4)	0.2	11.3	100.9	0.22
	1981	51.4	0.6	0.6	1.2	98.8	6.81
Old Dominion Freight Lines, Inc.	1982	104.5	3.5	0.7	21.7	96.6	6.69
	1981	94.2	3.4	0.4	21.6	96.3	4.88

continued

vice performance, according to Legg.

"To me, it makes no sense for a shipper to use a carrier that is not financially viable," says the financial analyst from Alex Brown and Sons. "Shippers who use these weak carriers are risking service disruption and tying up claims and receivables if the carrier goes out of business. But even more important, these shippers are siphoning revenues away from top-drawer carriers who would employ this money wisely."

Shippers who choose their carriers according to rate levels alone are making a big mistake, according to Legg.

"The carrier who is losing share of market because of poor service is often the one who is trying to stay in business by giving the biggest discounts," says Legg. "Big discounts should be a warning to shippers. These are probably the ones who can least afford it."

Looking at a carrier's financial performance may be a better way to evaluate carriers, according to Legg, who says there are a number of key indicators and ratios that a shipper can use to measure carriers' profitability, liquidity and efficiency. Legg also makes the caveat that these financial indicators are just guides. Carriers do not all operate in the same way. Some carriers lease all their equipment, while others own theirs. Others buy transportation from owner operators. Thus, financial figures are not always comparable. He also suggests looking at a number of years of data for a carrier rather than just one year.

"A balance sheet or operating statement is a snapshot," says Legg. "Look at balance sheets for several years to see if the carrier has been reinvesting and what changes have taken place in its debt, interest and equity."

One of the key concerns for shippers is the degree of reinvestment the carrier has been making. Depreciation indicators show this.

"You want to see depreciation expense rising, which indicates the company has been investing in new equipment," advises Legg. "If depreciation has been declining over several years, it means the company has been living off old equipment. So, if accumulated depreciation is within 70 to 80 percent of gross plant and equipment, then the equipment is probably old. A better ratio is 50 percent, or in other

continued

DISTRICT, CARRIER & YEAR		OPERATING REVENUES ($millions)	NET CARRIER OPERATING INCOME[1] ($millions)	NET INCOME[2] ($millions)	REVENUE TONS HAULED[3]	OPERATING RATIO[4] (percent)	RETURN ON EQUITY LESS INTANGIBLE PROPERTY[5] (percent)
Overnite Transportation Co.	1982	287.8	32.7	18.2	22.6	88.6	15.66
	1981	288.7	39.8	22.2	23.0	86.2	24.43
Pilot Freight Carriers,	1982	154.0	(7.5)	(7.8)	21.1	105.0	-0-
Inc.	1981	146.8	(3.8)	(1.7)	1.0	102.6	-0-
Poole Truck Line, Inc.	1982	55.3	3.2	0.7	2.2	94.1	5.90
	1981	51.8	4.8	1.5	2.4	90.6	14.14
RTC Transportation, Inc.	1982	157.4	6.4	2.1	22.6	95.9	18.66
	1981	131.4	3.1	0.7	1.9	97.6	7.42
Ryder Truck Lines, Inc.	1982	622.2	9.7	3.4	5.4	98.4	5.12
	1981	652.2	32.5	15.6	6.1	95.0	31.02
Southeastern Freight Lines	1982	50.6	3.4	2.9	20.6	93.2	28.77
	1981	54.0	3.9	3.3	0.7	92.7	32.4
The Motor Convoy, Inc.	1982	56.0	(0.1)	(0.8)	22.3	100.2	-0-
	1981	58.6	1.1	0.4	2.4	98.0	40.27
Thurston Motor Lines, Inc.	1982	97.3	2.9	(1.7)	21.2	97.0	-0-
	1981	94.1	5.8	0.7	1.2	93.8	2.49
Watkins Motor Lines	1982	111.3	4.3	2.1	0.7	96.1	19.44
	1981	107.0	5.7	2.2	0.7	94.6	28.96
TOTAL SOUTHERN CARRIERS(19)							
	1982	*3,167.9*	*44.7*	*(5.2)*	*34.9*	*98.6*	*-0-*
	1981	*3,340.0*	*120.0*	*49.8*	*37.5*	*96.4*	*11.04*
Western District							
ABF Freight System, Inc.	1982	$302.9	($4.2)	($11.7)	21.9	101.4	-0-
	1981	292.3	6.0	1.0	2.0	97.9	17.34
East Texas Motor Freight	1982	121.4	(15.5)	(4.9)	20.8	112.8	--
Lines, Inc.	1981	198.8	(9.0)	(5.8)	1.3	104.5	-0-
American Freight System,	1982	241.6	(0.9)	0.3	21.5	100.4	0.12
Inc.	1981	236.6	1.3	0.7	21.6	99.4	5.49
BN Transport, Inc.	1982	68.2	(1.6)	(0.7)	20.4	102.5	-0-
	1981	68.3	1.0	0.3	0.5	98.5	7.78
C. & H. Transportation	1982	116.4	7.1	2.6	21.0	93.8	9.10
Co., Inc.	1981	150.2	15.2	6.7	1.5	89.9	22.92
C. W. Transport, Inc.	1982	84.4	(2.8)	(1.4)	20.9	103.4	-0-
	1981	100.0	5.1	3.8	1.1	94.8	17.16
Campbell 66 Express	1982	78.7	0.6	0.8	20.5	99.9	0.49
	1981	86.0	3.0	0.9	0.7	96.4	6.26
Central Freight Lines, Inc.	1982	187.7	4.2	6.1	22.5	97.7	10.59
	1981	202.1	12.7	8.1	3.1	93.7	17.45
Chemical Express Carriers,	1982	55.1	1.8	(0.2)	25.5	96.7	-0-
Inc.	1981	62.0	0.9	0.8	26.4	98.5	8.54
Churchill Truck Lines, Inc.	1982	58.5	0.9	0.5	20.4	98.4	7.08
	1981	53.2	1.0	0.4	20.4	98.0	6.90
Consolidated Freightways	1982	1,036.8	57.1	37.6	24.4	94.5	12.18
Corp.	1981	999.4	76.0	52.8	4.3	92.4	21.18
CRST, Inc.	1982	71.9	2.3	2.2	1.3	96.8	34.78
	1981	64.5	3.0	2.7	1.3	95.3	56.74
Dallas & Mavis Forwarding	1982	38.7	0.3	0.6	20.5	99.0	0.96
Co., Inc.	1981	52.3	1.8	1.1	0.8	96.4	22.35
Delta Lines, Inc.	1982	137.0	(1.7)	(6.0)	21.0	101.3	-0-
	1981	144.7	(2.8)	(2.7)	1.1	101.9	-0-
F-B Truck Line Co.	1982	68.5	0.8	(0.4)	0.8	98.8	-0-
	1981	80.8	2.2	(--)	1.0	97.3	-0-
FFE Transportation	1982	55.9	(0.3)	(0.1)	20.5	100.6	1.46
Services, Inc.	1981	63.5	(1.7)	(0.6)	20.6	102.8	-0-
Garrett Freightlines, Inc.	1982	148.2	4.2	2.0	21.0	97.2	5.45
	1981	156.8	10.0	6.7	21.0	93.6	17.82
Global Van Lines, Inc.	1982	67.7	1.1	0.3	20.1	98.4	3.80
	1981	73.3	2.3	1.3	0.1	96.8	17.77
Graves Truck Lines	1982	65.7	(1.3)	(1.3)	20.5	102.0	-0-
	1981	73.1	(1.0)	(0.7)	0.6	101.4	-0-
Groendyke Transport, Inc.	1982	56.3	2.3	1.1	23.6	95.9	11.70
	1981	62.1	3.3	2.0	23.9	94.7	27.22
Illinois-California	1982	94.6	(1.9)	(3.7)	20.5	102.1	-0-
Express, Inc.	1981	110.6	1.8	(0.1)	20.7	98.3	-0-
IML Freight, Inc.	1982	133.1	(11.4)	(15.0)	20.6	108.6	-0-
	1981	166.2	(2.8)	(6.6)	0.7	101.7	-0-
International Transport,	1982	113.5	3.7	1.3	20.8	96.7	5.93
Inc.	1981	142.4	6.9	2.6	1.0	95.1	13.84
Jones Truck Lines, Inc.	1982	128.2	7.0	4.4	1.3	94.5	9.30
	1981	101.7	6.2	4.6	1.1	93.9	10.04
Lee Way Motor Freight, Inc.	1982	187.9	(26.3)	(12.7)	21.1	114.0	-0-
	1981	215.9	(8.3)	(2.6)	1.3	103.9	-0-
Lynden Transport, Inc.	1982	68.3	6.7	5.7	21.4	90.1	29.87
	1981	55.8	5.9	5.9	1.5	89.4	46.97

continued

words, the plant and equipment figure should be twice depreciation.

"Depreciation rates (depreciation as a percent of revenue) should be about four percent for general commodity carriers," says Legg. "For special commodity carriers that use a large proportion of owner operators, depreciation rates will be much less, maybe two to three percent. For capital intensive carriers such as tank lines, the depreciation rate could be as high as six or seven percent.

Another trend to watch is a carrier's cash flow, or cash throw-off (depreciation plus net income and deferred taxes). This figure will change from year to year, but cash flow as a percent of net property should be fairly constant.

There are numerous profitability ratios such as return on equity, return on transportation equipment and return on investment. All have significance to the shipper as well as to the investor.

"The return the carrier gets on transportation equipment (net income over gross plant and equipment) gives the shipper an idea of the carrier's policy on reinvestment," says Legg. "If this percent is less than the rate of inflation, then the company has been disinvesting."

According to the ICC, return on investment and return on equity should be at least that for other industries or investors will quickly place their funds in other ventures. The voluntary closing of a number of LTL carriers in the last year has been attributed to low ROI and ROE measures.

According to Legg, a carrier's profitability is also linked to its ability to reinvest.

"The amount of debt a carrier can sustain is directly dependent on the amount of money brought in," says Legg. "I think the coverage ratio shows this best. The carrier's interest expense should be covered by cash flow by at least three times, i.e., for every dollar of interest expense, there should be three dollars of pre-tax, pre-interest operating income."

Profits have even a simpler, and more important, meaning to shippers, says Legg.

"I suggest that shippers work with those carriers that are generating adequate profits to justify reinvestment," Legg concludes. "As the present overcapacity disappears in the not-too-distant future, shippers will need these quality carriers." ■

DISTRICT, CARRIER & YEAR		**OPERATING REVENUES ($millions)**	**NET CARRIER OPERATING INCOME[1] ($millions)**	**NET INCOME[2] ($millions)**	**REVENUE TONS HAULED[3]**	**OPERATING RATIO[4] (percent)**	**RETURN ON EQUITY LESS INTANGIBLE PROPERTY[5] (percent)**
Merchants Fast Motor Lines, Inc.	1982	98.2	9.8	4.8	20.9	90.0	54.58
	1981	107.2	12.5	5.9	21.1	88.3	64.40
Midwest Coast Transport, Inc.	1982	60.5	1.4	0.6	20.6	97.6	13.33
	1981	67.1	3.0	1.7	20.7	95.5	15.39
Midwestern Distribution, Inc.	1982	65.3	(4.1)	(2.5)	21.0	106.3	-0-
	1981	61.7	0.9	0.4	1.1	98.5	4.15
Milne Truck Lines, Inc.	1982	71.3	(3.5)	(2.2)	20.5	105.0	-0-
	1981	69.5	1.0	(--)	0.5	98.5	-0-
Murphy Motor Freight Lines, Inc.	1982	79.0	(1.2)	(1.3)	0.6	101.5	-0-
	1981	82.5	0.5	(0.2)	20.7	99.3	-0-
Northwest Transport Service, Inc.	1982	62.9	7.0	4.4	20.3	88.8	42.76
	1981	56.4	5.2	3.1	20.4	90.7	44.85
Pacific Intermountain Express Co.	1982	394.4	(6.0)	(3.1)	23.3	101.5	-0-
	1981	426.9	12.3	6.9	3.8	97.1	14.54
Pacific Motor Trucking Co.	1982	131.8	(15.8)	(16.6)	21.3	112.0	-0-
	1981	104.8	(13.3)	(13.4)	21.7	112.7	-0-
Red Arrow Freight Lines, Inc.	1982	46.9	0.4	0.7	20.6	99.0	9.02
	1981	50.8	1.7	1.1	20.7	96.6	15.06
Riss International Corp.	1982	81.1	(1.4)	(0.3)	21.2	101.8	-0-
	1981	89.9	1.5	1.2	1.2	98.3	11.25
Santa Fe Trail Transportation Co.	1982	54.6	0.1	0.4	0.2	99.8	4.52
	1981	62.0	2.2	0.7	20.3	97.1	9.12
Schneider Transport, Inc.	1982	160.0	1.2	1.0	23.0	99.2	31.75
	1981	168.8	0.9	(--)	3.0	99.4	-0-
Schwerman Trucking Co.	1982	61.0	(0.2)	(2.3)	25.7	100.4	-0-
	1981	78.0	(1.5)	(4.6)	7.0	102.0	-0-
Willis Shaw Frozen Express, Inc.	1982	54.8	3.6	1.9	20.5	93.3	14.72
	1981	57.7	5.1	2.6	0.5	91.1	25.40
System 99	1982	60.1	(0.1)	(3.2)	0.3	100.3	-0-
	1981	76.5	(2.8)	(3.8)	0.5	103.8	-0-
Sam Tanksley Trucking, Inc.	1982	42.1	1.7	1.2	20.3	95.8	11.98
	1981	52.9	3.0	2.2	0.3	94.2	27.27
Transcon Lines	1982	249.4	(7.3)	(7.1)	1.3	102.9	-0-
	1981	263.9	0.8	(0.4)	1.3	99.7	-0-
Tri-State Motor Transit Co.	1982	103.0	0.5	(0.7)	20.8	99.5	-0-
	1981	121.6	5.2	1.8	0.8	95.7	11.14
United Transports	1982	54.2	(1.8)	(1.8)	1.2	103.5	-0-
	1981	71.4	0.1	(1.2)	1.6	99.8	-0-
United Van Lines, Inc.	1982	245.4	0.2	1.3	20.4	99.9	8.79
	1981	261.2	1.8	1.5	0.4	99.3	11.71
Warren Transport, Inc.	1982	39.7	2.2	2.1	20.5	94.2	14.50
	1981	51.6	4.1	4.1	0.6	92.0	30.97
Wheaton Van Lines, Inc.	1982	31.8	1.0	1.0	2--	96.8	10.61
	1981	41.0	1.7	1.3	--	95.7	15.76
TOTAL WESTERN CARRIERS(48)	*1982*	*6,036.9*	*19.5*	*(15.4)*	*61.9*	*99.7*	*-0-*
	1981	*6,438.5*	*187.2*	*95.0*	*70.2*	*97.1*	*9.99*

---

[1] Net Carrier Operating Income - Difference between carrier operating revenues and carrier operating expenses.

[2] Net Income - Net income, after including fixed charges, non-operating income, income taxes, unusual or infrequent items, earnings attributable to discontinued segments, extraordinary items and cumulative effect of changes in accounting principles, but before extraordinary charges for write-down of operating rights and extraordinary credits for the tax effect of such write-downs.

[3] Revenue tons hauled reflects common and contract carrier service.

[4] Operating Ratio - Ratio of operating expenses to operating revenues.

[5] Return on Equity - Ratio of net income before net extraordinary charges for write-down of operating rights to shareholders' equity less intangible property at end of previous calendar year. The symbol -0- indicates a deficit in net income and/or shareholders' equity. The Commission, by decision of November 27, 1978, (I & S Docket No. M-29772) decided that return on shareholders' equity, less intangibles, is the most appropriate ratio for determining revenue need in motor carrier general increase proceedings; this decision, however, is presently being reconsidered by the Commission.

[6] The 100 carriers listed are generally the largest Class I U.S. motor carriers of property based upon 1981 revenues, with the following exceptions. Contract carriers are not included because the data filed by these carriers are substantially reduced in scope, in accordance with the Commission's revised reporting regulations, effective January 1, 1980. Also, the two largest motor carriers in terms of revenues generated, United Parcel Service, Inc. and United Parcel Service, Inc. (New York), are no longer included in this report because their operations are generally dissimiliar from the carriers shown in this report and other carriers in the motor carrier industry. Several carriers which are among the 100 largest are not included in this report because their data had not been received when this report was prepared. Those carriers were replaced by smaller carriers which rank just below the 100 largest in size in order to arrive at a listing of 100 carriers.

[7] On April 18, 1981, Dohrn Transfer Company was merged into Hall's Motor Transit Company. For purposes of comparability, the financial data shown for Hall's for the 12 months ended December 31, 1981 includes Dohrn's operating results for the first quarter of 1981.

[8] Data shown above for East Texas Motor Freight Lines, Inc. for the 12 months ended December 31, 1982 reflect operations from January 1, 1982 to September 30, 1982. Since this carrier merged into the ABF Freight System, Inc. in September 1982, the results of operations over its system from October 1, 1982 to December 31, 1982 are included in the data reported by and shown above for ABF Freight Systems, Inc.

Source: ICC Bureau of Accounts

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Chilton's

AUGUST 1983

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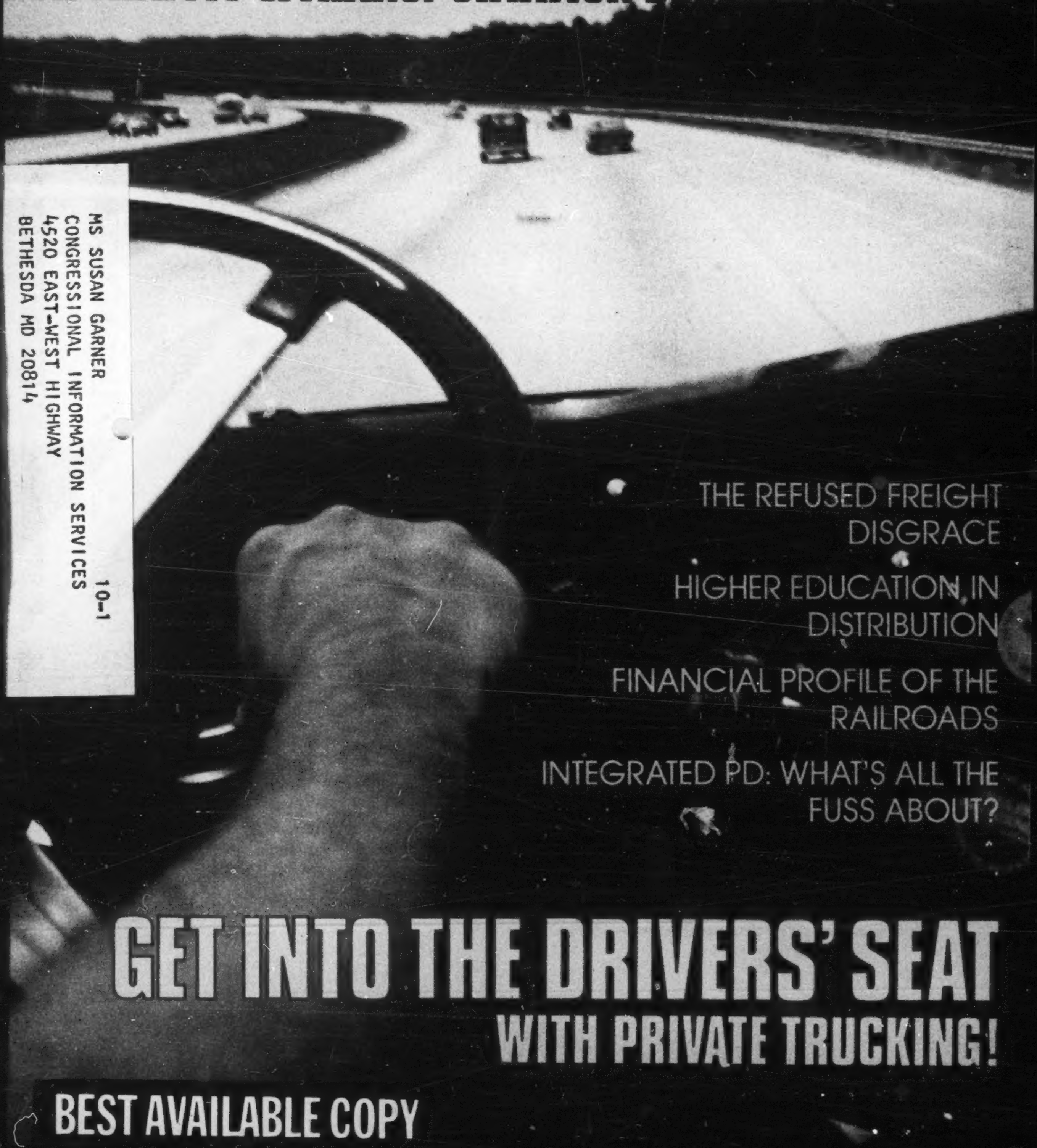
FOR TRAFFIC & TRANSPORTATION DECISION MAKERS



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FINANCIAL PROFILE OF THE RAILROADS

INTEGRATED PD: WHAT'S ALL THE FUSS ABOUT?

GET INTO THE DRIVERS' SEAT WITH PRIVATE TRUCKING!

VOLUME 82, NUMBER 8
AUGUST 1983

Chilton's DISTRIBUTION

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CLIFF MITCHELL, CIRCULATION MANAGER

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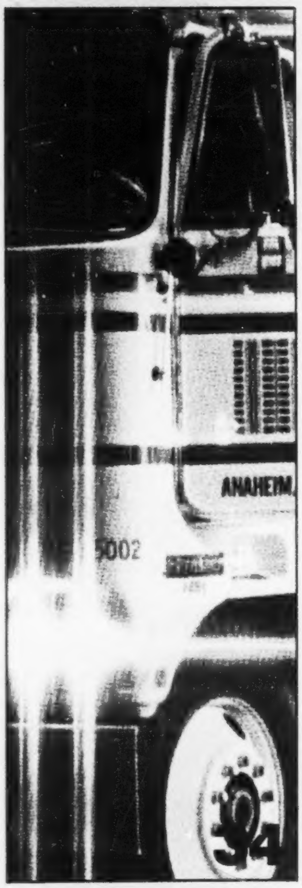

On the Cover: New roads are opening ahead of private fleets who are crossing over the line into for-hire profitibility. Photo courtesy of Rollins Leasing Company.

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DIALOGUE

BOXCAR DEREGULATION: NO SMALL MATTER

"With the current elimination of joint routing, switching reciprocity and the like, I can only foresee boxcar deregulation as an end to any common carrier obligation or understanding of same."—**H.M. Karel, director of distribution, Cleo Wrap Corp., Memphis, Tenn.**

"Deregulation of boxcars should allow the railroads to put freight back into the boxcar, freight that they lost to trucks. This will help get the boxcar off the storage tracks and back to the customer.—**R. Osborne, traffic manager, Fisher Mills, Inc., Seattle, Wash.**

"Deregulation of boxcars will cause some immediate shifts in traffic patterns for some shippers. There may be a temporary shortage of some types of equipment. After that, the law of supply and demand will take over and result in more efficient distribution."—**Thomas R. Hart, manager, traffic, Burroughs Corp., Wayne, Mich.**

"An ever decreasing number of boxcars in conjunction with an improving economy will increase boxcar rates based on car supply and demand. We small shippers will lack tonnage levels required to use as leverage with rail carriers."—**John A. Dykes, traffic manager, American Box Company, Fernwood, Miss.**

"Once again, I fear economic effects have been mistaken for 'deregulation' effects. The 'marketplace' is not an effective regulator of transportation for small and medium shippers who do not possess the economic clout to meet unregulated 'super' railroads head-to-head."—**E. Gary Masshoff, traffic manager, Kerr Pacific Milling Corp., Pendleton, Ore.**

"Boxcar business will be subsidized by hopper cars, flatcars and gondolas. There will be the creation of a new level of cost—boxcar agents—as happened with piggyback. Small shippers will be discriminated against. Railroads will call all the shots; if they want your business, they will price to get it, if not, shame on the shipper."—**William H. Bartlett, supervisor-commerce, Reynolds Metals Co., Richmond, Va.**

"I am concerned that the railroads may not continue to maintain an adequate boxcar fleet and boxcar service. I am also concerned with the loss of common carrier liability."—**J.P. Sims, manager of distribution, Gulf States Paper Corp., Tuscaloosa, Ala.**

"In the end, I feel deregulating anything helps because it leaves business up to competition. The best managers win."—**Manny Miyar, regional distribution manager, Universal Foods, Franklin Park, Ill.**

"Boxcar exemption will return us to the rapacious days of Sam Hill

QUESTION OF THE MONTH

One definition of ethic(s) in Webster's Dictionary is: The principles of conduct governing an individual or group. For everyone in our field, and every other field for that matter, those principles can become blurred.

The editorial in DISTRIBUTION's May issue talked about scrupulously honest distribution professionals. From a few letters and phone calls we heard about kickbacks and thefts; from still others, we were asked legitimate questions about legality and ethics. (For the full story, see this month's editorial.) Now, we want you to help us map out what those principles of conduct are at your company. Has your company, for example, established a code of ethics? Or, have you established your own code? Where do you stand on carrier gifts? Do those gifts influence your decisions? What are the grey areas where pat answers are hard to find? We would like you to take a minute and fill out the "Dialogue" card on page 106.

While we are not asking you for your name this time, for tabulating purposes we would like to know your title, the industry that you are working in and the state. What we are looking for is honest answers to tough questions. We want you to help us shed a little light on this murky area, or, if you have questions or comments, we want to hear them too.

SURVEY RESULTS

Even though most respondents to our boxcar deregulation questions had misgivings, a full 40 percent said no to deregulating commodities rather than equipment. Fourty-four percent said that they couldn't or didn't know if they could switch to trucks. About 42 percent saw equipment shortages ahead, but 81 percent said they wouldn't be able to switch to other rail equipment. A full 33 percent said the railroads would place more emphasis on boxcars, and 23 percent didn't expect abuses.

BOXCAR DEREGULATION	
Removing rate regs hurt	56%
Removing rate regs helped	26%
Removing car service charges hurt	40%
Removing car service charges helped	23%
Removing car service charges not affected	33%
Better to exempt commodities	56%
Able to switch to trucks	56%
No shortage of equipment	44%
Expect abuses by railroads	58%

and J.P. Morgan, squeezing out smaller railroads until only three or four remain. Then, the shipper will be over a bottomless barrel."—**Charles Risser, Trans/Audit, Portland, Ore.**

"Sixty percent of our tonnage (lumber) requires boxcars. Deregulation will cause horrendous equipment shortages at points not near 'gathering yards' on the railroads."—**A.M. Cheatham, vice president-traffic, Forest City Trading Group, Portland, Ore.**

"When produce shipments were exempted, the railroads serving Long Island raised their charges to a level where virtually no produce traffic moves there at the present time. I feel exempting boxcar traffic will do the same. There won't be enough room for all the trucks on our roads."—**Louis A. Paulson, principal, Professional Distribution Consultants, Dix Hills, N.Y.**

"Other modes of transportation will benefit by the ICC decision to jeopardize all railroads in their inept efforts to aid Conrail."—**R.W. Chapin, vice president, Gilman Paper Co., St. Marys, Ga.**

"I feel that deregulation will increase opportunities for long-term contracts that have the shipper's specific needs and wants in mind."—**Stephen J. Weissert, transportation manager-rail pricing, The Quaker Oats Company, Chicago, Ill.**

"Our railroad (short line) owns a considerable fleet of DFB boxcars to handle canned goods. Deregulation will cause considerable problems in negotiating per diem and milage rates with connecting railroads."—**Walter C. Brunberg, vice president-marketing, Stockton and Terminal Eastern Railroad, San Francisco, Calif.**

TO THE EDITOR

This law firm (Grove, Jaskiewicz, Gilliam and Cobert) represents the American Institute For Shippers Associations (AISA). . . .

We take great offense with the article by Colin Barrett which you published in your April, 1983 edition. This article indicates that the existence of shippers' associations may be violations of the antitrust laws and shippers are advised to see a lawyer about the antitrust ramifications of their membership in an association.

The remarks in the article are highly prejudicial against shippers' associations and are an incorrect summary of the legal situation. The attachment to this letter, which we request you publish, is an accurate statement of the law concerning the subject. . . .

Shippers' associations are solidly founded in the law and specifically acknowledged in the United States Code. As far back as 1911, twenty-one years after the Sherman Antitrust Act was passed, the Supreme Court noted in a very positive way the advantages such organizations give to shippers.

Shippers' associations are a type of buyer cooperative. The legal status of buyer cooperatives is clearly established and such organizationsare not considered to be violations of the antitrust laws merely because they combine the purchasing activity of many. See for example, G & P Amusement Co. v. Regent Theater Co., 107 F.Supp. 453 (N.D. Ohio, 1952), aff'd 216 F.2d 749 (6th Cir. 1954) cert. denied 349 U.S. 904 (1955). The chief of the Antitrust Division of the Department of Justice has stated: "It has been held that acquisition and retention of greater buying power though a cooperative purchasing agency, is not, in and of itself, inherently unlawful."

In a prepared speech delivered before a Delta Nu Alpha seminar on May 20, 1981, the chief of the transportation section of the antitrust division stated that shippers' associations were not by their very nature an antitrust violation.

Any commercial entity, be it an association, a trade group, or even a company acting singularly, can violate the antitrust laws if its activity unreasonably restrains trade. This is an accepted rule of antitrust law. But, there is nothing unique about applying such rules to shippers' associations any more then it is applied to any other business organization. Group purchasing arrangements conducted in a competitively reasonable way have been said by the courts and enforcement officials to not be violations of the antitrust laws. . . . There is no reason why the cooperative purchase of transportation services should be viewed any differently than other group buying arrangements.

. . . Many of the leading shippers' associations belong to the American Institute For Shippers' Associations (AISA). AISA has carefully evaluated the antitrust laws as they apply to shippers' associations and periodically advises its members concerning antitrust developments. In addition, many individual shippers' associations have specifically reviewed their particular operations from the standpoint of antitrust laws to ensure their full compliance.

In summary, shippers' associations, like all transportation entities, must be careful not to violate the antitrust laws. However, there is nothing inherently unlawful with such organizations and shippers should not feel that there are any particular antitrust problems raised by being a member.

James A. Calderwood

Colin Barrett replies: I wish Mr. Calderwood would read the article again. Certainly I am not a lawyer, and I wasn't offering legal advice. I was simply trying to identify potential trouble spots where transportation managers might want to seek legal advice.

I never suggested that "the existence of shippers' associations may be violations of the antitrust laws." I merely noted circumstances where particlar practices of such associations might be questioned, which doesn't seem at odds with his statement. . . .

The long-ago case decisions to which Mr. Calderwood refers are undoubtedly of concern to antitrust lawyers, but there is no history of case law useful as a practical guide to managers or others in today's transportation environment, which is what I wrote and meant. My comment about the FTC was addressed to an audience of shippers, not regulated carriers—and as shippers know from that agency's recent rulings on private-carriage pickup allowances, it's showing a lot of newfound interest in their activcities.

Lawyers often take the view that only they are qualified to understand the law. . . . But everyone (not just lawyers) must obey the law; so I thought your readers might want to know when it's a good idea to consult a lawyer about . . . an area of the law with which they are not familiar.

continued on page 92

FORECAST

BY DR. RICHARD LANCIONI

INVENTORIES SEEM TO BE REBUILDING

After nearly two years of little or no growth, inventories and factory shipments are making sharp gains. Manufacturing inventories rose 0.4 percent in May to $258.4 billion according the Department of Commerce. Factory shipments in the same month climbed 2.8 percent. These jumps brought the inventory to sales ratio down to 1.54, the lowest figure in in nearly four years.

According to the American Production and Inventory Control Society (APICS), investment in durable equipment is leading the inventory gains. Purchases of durable equipment rose 8.7 percent at an annual rate during the first quarter, compared with only a 2.6 percent increase in GNP.

Paradoxically, the goods that normally spring back in a recovery—machine tools, engines, construction, etc.—are not doing well and actually suffered declines in the first quarter. It seems these types of goods are no longer indicators of inventory build-ups. The real strength in the build-up of durable equipment is in computers and electronics, and not in heavy industrial components.

Another group that closely tracks economic activity affecting the distribution industry is the National Association of Purchasing Management (NAPM), which found in a June survey that production, employment and new orders are accelerating among its members.

The sectors experiencing the most growth, according to the NAPM, are consumer goods and automotive. Especially significant to the distribution community is that speed of vendor deliveries is continuing to slow, which suggests that backorders are increasing. The tighter figures on inventory to sales ratios reported by APICS echoes this trend.

No one seems able to agree on how long this trend will continue. A strong recovery should stimulate inventory building as well as sales. The threat of climbing interest rates, however, will temper this optimism. □

DISTRIBUTION INDEX FORECAST INDICATORS

	July 83	Aug.83	Sep.83	Point change from Previous Period
Truck Shipments:	117.9	118.2	120.3	+2.1
Rail Shipments:	109.7	110.1	111.9	+1.9
Air Shipments:	114.1	115.9	117.2	+1.3
Water Shipments:	106.9	107.5	108.3	+0.8
Whse Space Utilization:	114.2	115.1	116.7	+1.6
Inventory Valuation:	100.6	101.3	103.4	+2.1
Cumulative Index:	113.8	114.4	116.1	+1.7

(Base year is 1976 where all shipment levels were indexed at 100)

The Distribution Index for the third quarter is rising faster than at any time during the year. Truck shipments rose to the 120.3 level, up more than two points over the August period. Rail shipments increased by a similar amount, rising 1.9 points over the previous period. Air shipments marked their sharpest increase reaching a level of 117.2. The increases in these modes of transportation reflects the continued pickup in the general economy during the third quarter. Economists predict a growth in the GNP of 6.1 percent for the third quarter and a slightly lower growth rate of 5.5 percent for year. Water shipments also had their largest increase rising to an index of 108.3. Warehouse space utiliztion rose by 1.6 points over the August period reflecting the continuing trend toward increasing inventories. Similarly, inventory valuation rose to 103.4, portending a sharper rise in the inflation rate toward the end of the year. Overall, the Cumulative index will reach a level of 116.1, the highest it has been since last October.

TRANSPORTATION INDICATORS—

Monthly/Quarterly Trends

Diesel Fuel Prices (Cents per Gallon/Average)
(Interstate Commerce Commission)

May.83	Jun.83	Jul.83	Oct.83 (Forecast)
1.16	1.20	1.20	1.22

Dow Jones Transportation Index (Index Point Closing)
(Wall Street Journal)

May 13	Jun. 30	Jul. 15	Oct.83 (Forecast)
547.9	586.1	561.5	615.1

Rail Freight Traffic (Billions of Ton Miles)

Jul.83	Aug.83	Sep.83	Cumulative Forecast
58.6	59.9	60.0	398.0

The unemployment rate for the fourth quarter continues to decline and will reach a level of 9.5 percent by the end of the year. Fuel prices should remain fairly constant throughout the remainder of the year, giving carriers the breathing room they need to improve earnings. The investment community is nervous about the earnings outlook of all carriers, but the trend for the year is clearly optomistic despite a few fall backs experienced during the summer. Since August of last year, the Dow-Jones Transportation Index has risen about 100 points, indicating that the long term outlook for carrier earnings is good. Rail freight continues to climb and should reach a monthly rate of 60 ton miles in September.

FINANCIAL PROFILE

Railroads

After years of being in the financial doldrums, railroads are springing back to prosperity and their longterm profitability looks bright. The railroads and their customers differ, however, on how prosperous the carriers should be. And, shippers are now wondering what this new-found success will mean to them in the long run. Terms such as "disinvestment" and "diversification" are being bandied about by shippers who fear the railroads are not reinvesting their profits in transportation, but are looking for better returns in energy and natural resource ventures. The financial performance figures and forecasts give the shipper a good insight into just how well the railroads are doing and how they are reinvesting their profits.

BY THOMAS A. FOSTER, EDITOR-IN-CHIEF

Rail earnings in 1983 are way off the pace from last year. Ton-miles in 1982 were 12 percent down from 1981, which themselves were the lowest since 1976. Traffic so far in 1983 is even worse than in 1982.

With all this bad news, you'd think rail executives would be ready to throw themselves in front of the next freight train, but this is hardly the case. Rail executives are positively beaming with confidence, and perhaps with good reason.

Traffic seems to be coming back, particularly in merchandise freight such as autos, construction materials and lumber. Equipment and roadbeds for every major railroad are in good shape and need little reinvestment in the immediate future. When the full recovery does come, and traditional rail traffic like coal, ore, chemicals and farm products pick up, rail earnings should thunder ahead.

During the booming '60s and the sputtering '70s when most industries had good or great years, railroads were failing in record numbers. The term "nationalization" was more than a distant rumble. In the latest recession, which has rivaled the Great Depression for bankruptcies, the railroads have come through in healthy form.

The rail industry is still not totally out of the woods. Financial figures reported to the Interstate Commerce Commission for 1982 were disappointing. As noted on the financial figures on pages 68 and 69, no railroad made significant strides in 1982, and most suffered major set backs. Indeed, net income was down over 15 percent and revenues were down over seven percent. The ICC financial figures for the first two quarters of 1983 are not out yet, but they are not expected to come close to matching those for the same periods in 1982.

"Shippers should closely watch the balance sheets of trucking companies and maybe even airlines for signs of dangerous financial weakness, but shippers don't have to worry about financial strength among railroads," says William Legg, an analyst with Alex. Brown and Sons in Baltimore, Md.

"Railroads have the strongest balance sheets in the transportation industry. Cash flow is high. Depreciation is high. Cash reserves are huge in some cases. The capacity for debt is far beyond their needs," says Legg. "Besides, a shipper doesn't have the same risks with his rail carrier as he would with a truckline. If a trucker suddenly goes bankrupt, the shipper could lose his freight and will certainly suffer service disruption. If a railroad goes bankrupt, as many

continued

CLASS I LINE-HAUL RAILROADS SELECTED EARNINGS DATA

($millions)

DISTRICT, RAILROAD & YEAR		RAILWAY OPERATING REVENUES ($millions)	NET RAILWAY OPERATING INCOME a/ ($millions)	INCOME BEFORE EXTRAORDINARY ITEMS b/ ($millions)	NET INCOME c/ ($millions)	REVENUE TON-MILES OF FREIGHT	RETURN ON NET INVESTMENT d/ (Percent)
Eastern District	1982	$8,373.8	$56.5	$307.7	$307.7	178,331	.58
	1981	9,262.3	249.6	456.6	459.4	196,076	2.71
Southern District	1982	4,987.0	230.0	390.6	390.6	196,076	3.17
	1981	5,616.8	372.0	519.8	519.8	167,533	5.514
Western District	1982	14,145.7	481.1	483.1	483.1	478,593	2.67
	1981	16,019.3	764.2	1,027.0	1,123.9	548,071	4.42
TOTAL ALL DISTRICTS	1982	27,506.7	767.7	1,181.5	1,181.5	799,181	2.19
	1981	30,898.6	1,385.9	2,003.5	2,103.1	911,680	4.17
INDIVIDUAL RAILROAD DATA							
Eastern District							
Balitmore & Ohio	1982	$899.9	$0.2	$(2.6)	(2.6)	20,095	-0-
	1981	1,059.2	32.8	72.6	72.6	22,968	2.41
Bessemer & Lake Erie	1982	82.0	0.2	3.5	3.5	1,620	-0-
	1981	117.8	13.9	21.9	21.9	2,114	8.881
Boston & Maine	1982	120.0	(5.5)	(2.2)	(2.2)	2,424	-0-
	1981	121.9	(1.3)	5.2	6.3	2,250	-0-
Chesapeake & Ohio	1982	1,041.1	68.5	118.3	118.3	28,866	5.85
	1981	1,057.1	60.4	175.8	175.8	28,768	5.63
Consolidated Rail Corp.	1982	3,440.4	(124.0)	2.4	2.48	67,999	-0-
	1981	4,001.1	(83.9)	(106.6)	(106.6)	79,034	-0-
Delaware & Hudson	1982	110.5	(10.9)	(20.2)	(20.2)	3,247	-0-
	1981	120.1	(6.5)	(14.8)	(14.8)	3,495	-0-
Detroit, Toledo & Ironton	1982	68.2	(14.5)	(16.4)	(16.4)	1,284	-0-
	1981	86.4	0.4	(2.4)	(2.4)	1,507	-0-
Elgin, Joliet & Eastern	1982	89.1	3.9	8.0	8.0	465	2.67
	1981	109.9	5.6	11.5	11.5	547	3.91
Grand Trunk Western	1982	235.7	(7.9)	(11.4)	(11.4)	3,349	-0-
	1981	234.6	7.1	6.8	6.8	3,742	2.55
Long Island	1982	415.0	(35.2)	(39.9)	(39.9)	30	-0-
	1981	392.1	(29.7)	(35.1)	(35.1)	39	-0-
Norfolk & Western	1982	1,737.2	185.2	273.4	273.4	46,192	8.12
	1981	1,785.9	239.2	291.0	291.0	48,434	11.08
Pittsburgh & Lake Erie	1982	47.2	(11.6)	(16.6)	(16.6)	1,127	-0-
	1981	82.6	3.1	20.1	21.7	1,303	2.87
Western Maryland	1982	86.8	9.2	11.5	11.5	1,626	5.74
	1981	93.1	9.1	10.5	10.5	1,869	5.68
Southern District							
Clinchfield	1982	$100.6	11.38)	0.0	0.0	4,170	7.96
	1981	104.2	25.6	0.0	0.0	4,389	18.11
Florida East Coast	1982	91.77	4.8	12.5	12.5	2,450	2.67
	1981	102.6	5.6	11.8	11.8	2,850	3.62
Illinois Central Gulf f/	1982	895.8	(29.1)	(24.8)	(24.8)	24,104	-0-
	1981	1,032.7	(16.3)	(5.9)	(5.9)	29,967	-0-
Louisville & Nashville	1982	1,103.8	70.4	32.6	32.6	34,016	4.88
	1981	1,267.4	98.3	104.4	104.4	40,663	7.29
Seaboard Coast Line g/	1982	1,111.3	22.1	226.6	226.6	31,053	1.39
	1981	1,319.0	32.8	197.4	197.4	36,505	2.17
Southern Ry.	1982	1,603.5	150.4	143.4	143.5	46,460	5.58
	1981	1,790.6	226.0	212.0	212.0	53,157	9.49
Western District							
Atchison, Topeka & Santa Fe	1982	$2,077.6	$74.92)	$56.2	$56.2	68,291	2.65
	1981	2,370.7	136.5	110.5	110.5	75,741	5.17

continued

have, the service just continues.

"What the shipper has to look out for with the railroads is how the company is reinvesting its capital. Is it putting it in equipment and roadbeds, or is it diversifying? Diversification isn't bad in itself, but the shipper should realize that the railroads are being run for the shareholders, and not necessarily for the shippers," says Legg.

But totally non-rail-related investments do worry shippers. The holding company for the Atchison, Topeka & Santa Fe Railway, for instance, is investing $140 million over six years to begin mining its own coal reserves in New Mexico's San Juan Basin. The holding company for the Santa Fe already gets 38 percent of its pre-tax earnings and 14 percent of its profit from non-rail business.

Other large rail companies such as the Burlington Northern, the Union Pacific and the Southern Pacific have derived much of their earnings from natural resources and real estate, most of which were part of the original land grants from the federal government.

There is a new trend, however, toward diversification into areas totally unrelated to either railroading, natural resources or real estate. The Kansas City Southern and the Denver and Rio Grande, for instance, have investment in computer service companies. We have even heard that a midwest railroad is investing in a hosiery company.

"It makes good business sense for the railroads to diversify," says Sally Smith, another analyst for Alex. Brown and Sons. "Railroading is a cyclical industry and it just makes sense to find businesses that will be up when the rail industry is down. Certain railroads have huge cash reserves for the months ahead. This is not to say that railroads are no longer interested in this business or that they won't reinvest in it. I expect to see more mergers of railroads and purchases of non-rail transportation companies."

Whatever happens in the merger and acquisition ring, it shouldn't be of great concern to shippers, according to Sally Smith.

"It would be one thing if the railroads were letting their systems fall apart to make speculative investments, but this just isn't happening," says Smith. "The rails are certainly looking out for their stockholders, but they are not ignoring the needs of the shipper. During the '70s, all the railroads spent huge amounts of money on rebuilding their roadbed and improving their equipment. Capital spending for the rails has been down recently, but that is a function of the recession. When traffic is down, the roadbed does not need as much maintenance and equipment does not wear out as fast. In fact, about 20 percent of all rail equipment is in storage right now. The railroads are ready for a strong recovery, and shippers shouldn't have any worries about poor equipment or deferred maintenance."

The capital needs of the railroads are not over, however, according to Mary De Sapio, who spoke on this subject at the fall meeting of the National Council of Physical Distribution Management.

"The railroad industry will need $16 billion to $20 billion in additional capital by 1985," said De Sapio, who is a vice-president in the New York brokerage firm. "This amount will be needed just to maintain current service and to improve [rolling stock and roadbed] for more coal haulage. Capital needs by 1985 will total $42 billion.

"The Staggers Act allows the rail industry to increase its revenue, subject to ICC approval, from $28.2 billion in 1980 to $38.8 billion in 1985 in terms of real dollars. This averages an 11.7 percent return on capital versus the 4.3 percent in 1981," said De Sapio.

According to De Sapio, the current rates of return are still inadequate to support the rail capital needs of $42 billion through 1985. The good news is that mechanisms are in place now to help the railroads.

"The [Staggers] Rail Act was followed by the Reagan Administration's Economic Recovery Tax Act of 1981, which provided the rail industry with several unique opportunities to meet its capital need," says De Sapio.

"Major cash flow benefits can be attained [as a result of the Tax Act] to write off through five years the railroads' 'frozen base' of non-depreciated property," says De Sapio. "The railroad industry has a frozen base of non-depreciated track amounting to over $6 billion. Based on the assumption that maximum write-offs could be used, the cash flow provided in this five year period would approach $3 billion. . . .

"In any other period before Staggers, many railroads would be experiencing sharp financial reversals," says De Sapio. "These two acts [Staggers and the Tax Act] gave the

continued

DISTRICT, RAILROAD & YEAR		RAILWAY OPERATING REVENUES ($millions)	NET RAILWAY OPERATING INCOME a/ ($millions)	INCOME BEFORE EXTRAORDINARY ITEMS b/ ($millions)	NET INCOME c/ ($millions)	REVENUE TON-MILES OF FREIGHT	RETURN ON NET INVESTMENT d/ (Percent)
Burlington Northern	1982	3,767.1	183.1	174.3	174.3	157,714	4.43
	1981	4,080.6	204.9)	273.3)	273.3)	174,940	5.12
Chicago & North Western	1982	807.8	(15.1)	(26.4)	(26.4)	22,866	-0-
	1981	983.1	19.5	7.5	19.3	29,515	4.01
Chicago, Milwaukee,	1982	363.5	(38.8)	(21.5)	(21.5)	9,411	-0-
St. Paul, & Pacific h/	1981	404.3	(152.4)	81.4	173.1	10,518	-0-
Denver & Rio Grande	1982	292.4	17.8	16.1	16.1	9,841	4.70
Western	1981	335.0	30.6	30.2	30.2	11,568	8.14
Duluth, Missabe & Iron	1982	54.3	(8.7)	(4.5)	(4.5)	1,023.7	-0-
Range	1981	108.8	6.9	12.9	12.9	2,215	5.79
Kansas City Southern	1982	307.5	28.1	16.0	16.0	10,704	7.25
	1981	310.1	38.3	26.6	26.6	9,880	10.70
Missouri-Kansas-Texas	1982	230.0	17.3	6.1	6.1	6,693	7.03
	1981	268.2	26.6	14.3	7.6	8,402	13.01
Missouri Pacific	1982	1,678.7	148.2	108.6	108.6	49,766	6.32
	1981	1,887.6	178.5	148.3	148.3	58,298	8.40
St. Louis Southwestern	1982	340.9	27.8	33.8	33.8	11,319	4.28
	1981	388.8	24.2	61.0	61.0	13,341	4.15
Soo Line	1982	284.1.8	12.3	15.2	15..2	7,924	2.98
	1981	329.6	33.0	36.3	36.3	9,560	8.32
Southern Pacific	1982	1,996.0	(85.6)	8.1	8.1	59,505	-0-
Transportation Co.	1981	2,262.8	12.6	47.8	47.8	65,175	.49
Union Pacific	1982	1,773.3	127.7	105.0	105.0	59,677	4.40
	1981	2,100.7	214.4	167.3	167.3	74,544	7.43
Western Pacific	1982	177.7	(8.1)	(4.0)	(4.0)	3,854	-0-
	1981	188.2	(10.3)	9.1	9.1	4,367	-0-

a/ Net Railway Operating Income—Difference between operating revenues and the total of railway operating expenses, railway tax accruals and net equipment and joint facility rents.

b/ Income Before Extraordinary Items—Net income after including fixed charges, non-operating income, unusual or infrequent items and earnings attributable to discontinued segments but before extraordinary items and cumulative effect of changes in account principles.

c/Net Income—Net income after extraordinary items and cumulative effect of changes in account principles.

d/ Return on Net Investment—Ratio of net railway operating income to net invetment in railway property used in transportation services at end of previous calendar year. The latter includes an allowance for working capital based upon the Commission's Rail Form A formula. If net investment data as of the end of each quarter were available, returns on investment would be computed by using an average of the net investment at the beginning and at the end of the respective twelve month periods. However, net investment data is generally only available as of the end of the calendar year; a substantial portion of this data is derived from annual reports (Form R-1) of Class I line-haul railroads which are required to be filed with the Commission by March 31 of the following year. Thus, the net investment data used for this report which represent the latest available end of calendar year data are not averaged in order to assure that net railway operating income is more closely equated, timewise, with the railroad assets generating this income. The symbol -0- for return on net investment indicates a deficit net railway operating income.

e/ Large difference between Consolidated Rail Corporation's net income and net railway operating loss for the fourth quarter and year 1982 was attributable primarily to $135.1 million of unusual or infrequent income items in 1982, consisting of: (a) $91 million of sales of tax benefits under provisions of the Economic Recovery Tax Act of 1981; and (b) a $44.1 million reversal of allowances for uncollectable receivables resulting from the transfer of commuter operating to regional commuter authorities.

f/ Illinois Central Gulf Railroad Company reported a $45.3 million net railway operating income and a $41.8 million net income for the fourth quarter 1982 because of a $58.5 million year-end write-off of its deferred income tax liability. This resulted in a large negative income tax expense. Consequently, net railway operating loss of $29.2 million and net loss of $24.9 million for the twelve months ending December 31, 1982 were substantially reduced because of this $58.5 million adjustment. Management disclosed that an extensive study resulted in a finding of no deferred income tax liability.

g/ Large difference between Seaboard Coast Line Railroad's net railway operating income (loss) and net income for the fourth quarter and twelve months ending December 31, 1982 was attributable primarily to $153.7 million of dividend income from Atlantic Land and Improvement Company, a wholly owned subsidiary. This resulted from the latter company's sale of a wholly owned subsidiary.

h/ The large favorable difference between Chicago, Milwaukee, St. Paul & Pacific Railroad Company's net income before extraordinaary items and net income for the twelve months ending December 31, 1981 resulted primarily from extraordinary income from the following: (a) elimination of Federal taxes through utilization of tax loss carry forward; and (b) gain from extinguishment of certain long-term debt. The large difference between net railway operating loss and net income before extraordinary items for the twelve months ending December 31, 1981 was attributable primarily to dividend income and equity in undistributed earnings from affiliates, principally from the Milwaukee Land Company's sale of timberland and reserved mineral rights.

industry the muscle it needed to withstand the slump and pass along reduced rates to shippers."

While this "frozen base" provision of the Tax Act of 1981 helped the railroads' cash flows, a more recent tax ruling has less appeal to the railroads.

For decades, the railroads had been using the so-called replacement retirement betterment (RRB) system of accounting for track replacement. Last year, the ICC ruled that railroads could no longer use this method, which allowed all track maintenance costs to be expensed in the current year. Instead, the ICC said these costs had to be depreciated over 30 years. The results of this seemingly obscure ruling could have great impact on rail finances.

With track costs depreciated over a long period of time, the annual maintenance costs will be lower and reported earnings will be higher—at least on the books. The actual money spent will be the same, but the results will be reported differently. Estimates for how much better rail earnings will look range from 10 percent higher to 30 percent higher.

Railroad executives correctly point out that these reported earnings will have the illusion of being higher. They fear that this appearance will make it harder for railroads to boost rates. Also, they fear taxes will be higher and unions will ask for more money.

The reasoning for the change is probably thoroughly understood only by an accountant, but one past abuse, obvious to all shippers, should be eliminated by the switch away from the old accounting system. Deferred maintenance will be less attractive under the new system. Under the RRB system, annual earnings could be manipulated to some extent. When times were good, maintenance was done; but when times were bad, earnings could be bolstered immediately by not doing the maintenance.

Present-day earnings problems go far beyond the issue of how track maintenance is accounted for, however. They key issue is what rate levels are necessary to make railroads' revenue adequate. The Staggers Act states that railroads should be revenue adequate, but it never defined exactly what this meant.

Many shippers seem to think "revenue adequate" means anything the railroads want it to. They want it to mean the cost of capital, plus a profit. The ICC, which ultimatley has to decide the issue, is working on a new definition.

The concept of revenue adequacy is important to ratemaking under the Staggers Act, and it will become even more important. In Staggers, the zone of rate flexibility is tied to revenue adequacy. For the first four years after Staggers, rates can be raised up to six percent a year above the inflation index. After four years, the zone of flexibility will be limited to four percent and restricted to carriers not earning adequate revenues.

In 1980 when the ICC first came up with a formula for revenue adequacy, only three small railroads met the minimum levels (Besemer & Lake Erie; Fort Worth & Denver; and Elgin, Joliet and Eastern). The formula then was simple. The ICC determined that railroads were capitalized with 60 percent equity and 40 percent debt. At the time, equities were yielding 13.5 percent and bonds earned nine percent. Using a weighted average, the cost of capital (and thus the minimum for revenue adequacy) was 11.7 percent.

Both shippers and railroads have taken issue with this method. Shippers say that the cost of capital really is a mixure of the costs of past and current bonds, loans and stock issues. In addition, shippers say the low risk, monopolistic nature of railroads has to be considered. The railroads, through the Association of American Railroads, submits what it believes to be its members' capital costs if all capital had to be raised today.

The ICC is in the process of revising its revenue standards. In March of this year, the ICC started *Ex Parte 363, Sub 1, Standards for Railroad Revenue Adequacy*. Comments are nearly complete, and a rulemaking is due in September.

Suggested revisions include:

1. Calculation of return on investment (ROI) to consider all transportation elements of income, expense and investment. If only transportation items are considered, then non-rail earnings, which usually are high, will not be included in the railroad's profitability. Shippers think this will make very profitable, conglomerate rail companies look poorer than they are.
2. Normalizing data to compute ROI. This means four years of average figures could be used instead of just one year.
3. Computation of ROI on a consolidated basis to include all rail affiliates of a railroad. Shippers have mixed reactions on this point. The result could be that a strong, revenue adequate railroad will gain the flexibility of being considered revenue inadequate if other subsidiaries are averaged in.
4. Conversion from cost-based investment to one based on current or replacement costs to determine revenue. Everyone agrees that revaluing certain assets, such as land, in current terms would be difficult. If it were done, it would probably make the railroads seem more profitable then they really are. ■

ASSOCIATION OF AMERICAN RAILROADS' ANALYSIS OF CLASS 1 RAILROADS

The most complete and detailed source of financial data on the major railroads in the U.S. is published each year by the Economics and Finance Department of the AAR. Called the *Analysis of Class 1 Railroads*, this 200-page document presents 1981 data for each of the 39 class lines then in operation, along with industry-wide data. This volume includes data previously presented in the following individual publications:

Statistics of Railroads of Class 1
Operating and Traffic Statistics
Property Investment and Condensed Income Account
Hire of Freight Cars
Crosstie Statistics
Public Relations and Advertising Expenses
Demurrage Charges
Weight of Rail
Rank of Class 1 Railroads (Individual Railroads)
Rank of Class 1 Railroads (Systems)

The Analysis is very detailed, but it provides less than current data. The present edition covers 1981 and the 1982 edition will be published at the end of this year.

Copies of the Analysis are available for $75. Orders should be directed to Steve Moran, Economics & Finance Department, Association of American Railroads, 1920 L St., NW, Washington, DC 20036

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SEPTEMBER 1983

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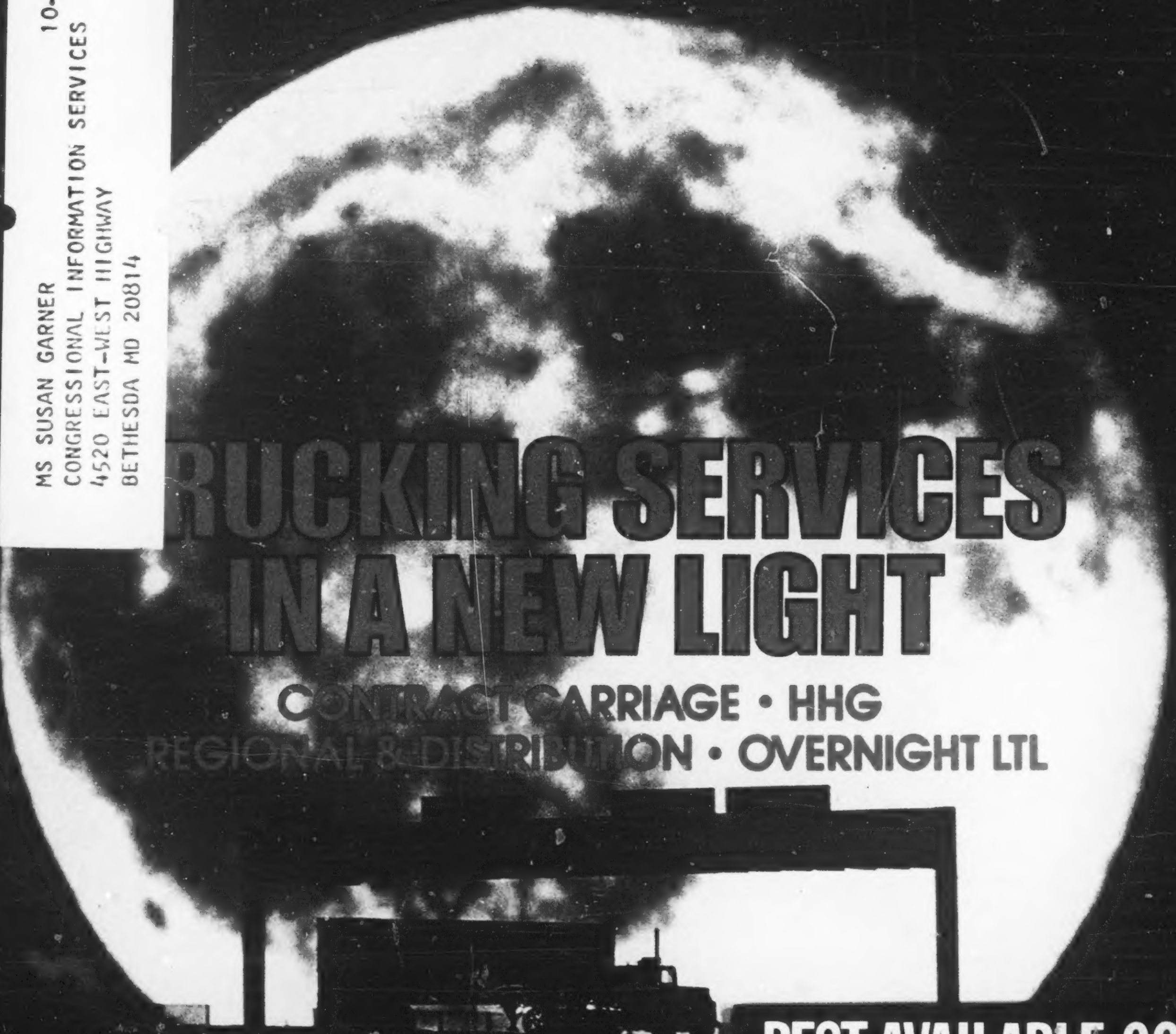

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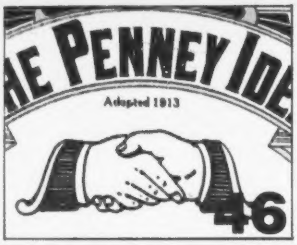

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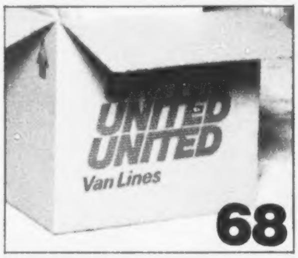

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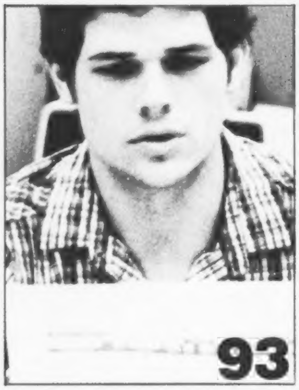

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DIALOGUE

BROKERS: WHERE DO THEY FIT?

"As a company, we have had some recent service problems with trip leased units brokered with licensed brokers. These included not arriving at the plant at the designated time, not delivering the material as instructed due to "personal business" (horse shows, rodeos, etc.) and not being "presentable" when delivering or picking up our material. I am having second and third thoughts about using brokers because of the above noted difficulties. Now that business is picking up, good reliable service is more important than ever."— **Dennis Webber, traffic manager, Interstate Brick Co., West Jordan, Utah.**

"If a firm has a good transportation/distribution department, they don't need a broker."—**Unsigned.**

"We use brokers mostly on out-of-territory casual shipments. We always tell them: 'If you can't meet schedule, reject the load.' "—**Bob Hanson, manager—traffic, Oxford Chemicals, Atlanta, Ga.**

"Brokers undermine common carriers by cutting charges, and they don't offer the reliability or consistency of service."—**F. Scamardi, traffic manager, Flexible Steel Lacing Co., Downers Grove, Ill.**

"I don't foresee using brokers. We can deal with carriers directly and save that money. I'm also not convinced of brokers' reliability or integrity."—**R.J. Marshall, traffic manager, Duraco Products, Streamwood, Ill.**

"The brokers who I deal with haul commodities southbound. I have had no problems in the two years that I have used them."—**Patricia Hannom, purchasing/traffic, So Comm Corp., Miami, Fla.**

"Brokers are needed to provide capacity during peaks and to keep the other forms of carriers price competitive."—**H. Nichall, RRD, Warsaw, Ind.**

"Why would I want to be a broker? Our company doesn't have a private fleet."—**Patti Phillips, traffic manager, Eagle Picher Ind., Inc., Joplin, Mo.**

"We use brokers regularly in our business, and we have found many reputable, reliable brokers. They're a valuable part of our distribution system."—**Patti Hines, traffic manager, Kal Kan Foods, Inc., Vernon, Calif.**

"Brokers are going to be an integral part of the transportation environment."—**J. Kevin Michel, vice president, Michel Warehousing Corp., Cockeysville, Md.**

"Through present contacts with other modes, we can provide these services for our company at lower cost."—**John F. Eggleston, traffic manager, Facet Enterprises, Inc., Henderson, N.C.**

continued on page 10

QUESTION OF THE MONTH

Are you at the forefront of the computer revolution, or are you bringing up the rear?

No doubt some aspect of the physical distribution cycle at your company is computerized. It may be order processing, bill of lading preparation, freight payment, rating or other clerical functions. Or, if you are more sophisticated, you may do some "thinking" on your computer, such as routing, site location, forecasting, and so on.

But no matter how much or how little computerization you have, the needs of your company and the available products are always changing. Companies centralize or decentralize. The competitive environment changes. Or more often, software and service become obsolete, and have to be updated or replaced.

We would like to know more about what functions are computerized at your company.

Even more important, we would like to help you stay at the very forefront of the computer revolution.

Besides our regular coverage of computerization in *DISTRIBUTION*, we will soon be publishing a newsletter devoted to this subject. We want to know what your information needs are, so we can best serve you. Now is your chance to find out how your computer operations stack up next to other companies'. And it's your chance to tell us what you want to know about this fast-changing field. ☐

SURVEY RESULTS

Our survey said that other than for headhaul and backhaul, 19 percent of those responding used licensed brokers for consolidations, and six percent relied on them for special cargo. Thirteen percent said they used brokers because of equipment availability, and another 13 percent cited brokers' expertise. Only four percent of those responding said theft was a concern with using licesned brokers. Under benefits in becoming a broker, 13 percent mentioned the potential for contract carriage.

LICENSED BROKERS	
Used licensed broker recently	68%
For head- or backhaul	68%
Prime reason was rates	53%
Prime reason was service	40%
Concerned with unreliability	68%
Or, no insurance	38%
No, haven't considered brokering	51%
Yes, have considered it	49%
Would boost backhauls	36%
Boost volume	34%

TO THE EDITOR

I have my copy of your May issue which includes the "Broker" story.

Congratulations on a job well done. The article attracts attention to an emerging activity.

I also note with particular interest your editorial comments which hit the heart of a problem that has developed with the theme of deregulation. The broker article and your editorial should be merged.

In the "real world" many shippers are very skeptical of brokers, particularly those fringe operators who sort of play the game by ear, treating motor carrier service in general as some sort of "exempt" activity where pricing and carrier authority are negotiated on an individual basis. Numerous large shippers know the rules quite well, and they fully intend to abide by existing rules and regulations.

When a carrier takes possession of a shipper's property, there is a bailment; the carrier has a special kind of responsibility to perform a specified service. A broker must share in that special responsibility, in spite of the fact that the "broker" is not normally a carrier.

T.B.C.A. (Transportation Brokers Conference Association) is attempting to improve the image of brokers, particularly those who have an ICC license. Hopefully, T.C.B.A. will be something like the National Association of Travel Agents, accepting members who pass a credit and integrity test.

Unfortunately, the term "broker" is a generic noun that can be anyone doing almost anything. In the motor carrier industry, the term seems to relate to: shipper's agents; commission sales agents; load locators who seem to appear at truck stops where independent owner/operators congregate; various fringe operators who have some kind of contact with commercial vehicles; and shippers who have something to move from one place to another. A licensed motor carrier transportation broker, who is bonded for at least $10,000 to cover the handling of freight money, should be charged with a special responsibility to protect the interest of both shipper and carrier.

We have some new opportunities in the deregulated environment to establish relationships between responsible brokers and contract carriers that could accomodate economical utilization of private corporate fleets. There is also the opportunity for responsible brokers to participate in intermodal activity along with freight consolidation. Public warehouse operators should be particularly attracted to the opportunities available to responsible motor carrier brokers. Many warehousemen have acquired broker authority and know how to use broker activity to supplement their commercial storage business.

Charles H. Wickman
Wickman Traffic Service, Inc.
Western Springs, Ill.

(continued from page 9)

"Brokers have access to all O-O's, and you don't have to search for equipment."—**J.L. Bishop, traffic manager, Pinto Valley Copper Corp., Miami, Ariz.**

"Brokers are as good as the truckers that they do business with."—**J.R. Johnson, traffic manager, Wieboldt Steel, Des Plaines, Ill.**

"Cost performance only when the cost vs. customer service ratio still remains weighted in the customer's favor."—**Edward J. Brofka, distribution center manager, Sherwin-Williams Co., Baltimore, Md.**

"We want to rely on a qualified, experienced broker. I'm not quite sure how to measure that."—**P.S. Hartung, manager of lab operations, Sperry, Reston, Va.**

"Most brokers who have called on me present all the necessary papers at the time of the initial sales call. I will not even set up an appointment without telling them that that is the first item I must see."—**L.A. Collins, materials manager, Ellisco, Inc., Philadelphia, Pa.**

"The number of carriers seeking our business—LTL, volume and distribution and assembly programs—is proliferating. A broker has not been used or needed to get our distribution jobs done."—**Appleton, Wis.**

"A good broker can offer shippers many more national alternatives than a common carrier."—**J.R. O'Dell, president, Peninsular, Jacksonville, Fla.**

"I agree that 50 percent of all traffic will be by broker arranged moves. Send me more information."—**Robert McDonnell, traffic manager, Bud Industries, Willoughby, Ohio.**

"I see using brokers for special equipment and rates."—**Bryan Walker, traffic manager, Eugene Welding Co., Marysville, Mich.**

"It may provide better coordination of trucks to needs with a potential to expand in a for-profit manner."—**A. Broomm, general manager—traffic, American Culloid, Skokie, Ill.**

"I would like to hear about the pros and cons of being a broker for our company."—**J.R. Murphy, traffic manager, General Motors, Warren, Mich.**

"As a specialized field where backhauling is becoming increasingly important."—**D.F. O'Donnell, vice president, Coastal Tank Line, Akron, Ohio**

"Brokers still rely on owner/operators, and many owner/operators are unreliable."—**Unsigned.**

"Brokers are performing backhauls for the contract carriers that replaced common carriers of LTL for us, and I see more of the same."—**Jack Grunden, purchasing manager, Certified Brakes-LSI, Danville, Ky.**

"Are the companies ready to pay claims if the carrier doesn't? They will need a full-time sales activity or this will die. This company has enough problems without a new, part-time business."—**Unsigned.**

"Possible better utilization of our private fleet—creative transportation."—**Dale Johnson, traffic manager, Tillie Lewis, Stockton, Calif.**

"Most brokers lack the knowledge to do their 'jobs' effectively. In general, they are an unreliable, sorry lot."—**Unsigned.**

"I need to know more about licensed brokers."—**Edgar Caterson, central New Jersey chapter president, Delta Nu Alpha, N. Brunswick, N.J.**

FORECAST

BY DR. RICHARD LANCIONI

UP, UP AND AWAY, SAY PURCHASING MANAGERS

The U.S. economy has grown more rapidly in the third quarter of 1983 than in any year since 1978. The growth rate for the period has averaged 6.9 percent after adjustment for inflation. The National Association of Purchasing Agents (NAPA), which computes a seasonally adjusted index of its members in 250 industrial companies, reported that the index reached 67.1 percent in August compared with a 59.6 reading in July. NAPA's index measures employment, new orders, inventories, and capital expenditure commitments. Through September, all categories of the survey are expected to increase. The only element that is experiencing only moderate improvement is capital spending for plant and equipment, which indicates many companies are still in the maintenance phase of current operations and are still evaluating future plant expansions. During the fourth quarter, capital expenditures should accelerate and follow a typical recovery pattern.

In the area of employment, 23 percent of the companies in the NAPA survey reported increases in employment for August. Increased production was reported by 42 percent as compared to only 35 percent in July. New orders also increased for 43 percent of the NAPA survey respondents, and over 25 percent had higher inventories in August over all previous months in 1983. The optimistic report reflects the upward trend in the economy, as well as the trends reported in the Distribution Index.

But caution is still needed. As one purchasing manager put it, "Everything is up, up and away. But can we sustain at his rapid rate of growth and still keep down prices and interest rates? What good is all of this new growth if inflation comes back?"

Indeed, caution is the watchword. One third of the firms in the NAPA survey reported higher costs for most items in August as compared with only about a quarter in July. ☐

DISTRIBUTION INDEX FORECAST INDICATORS

	Aug.83	Sep.83	Oct.83	Point change from Previous Period
Truck Shipments:	118.2	120.3	122.1	+1.8
Rail Shipments:	110.1	111.9	113.6	+1.7
Air Shipments:	115.9	117.2	119.7	+2.5
Water Shipments:	107.5	108.3	109.7	+1.3
Whse Space Utilization:	115.1	116.7	119.4	+2.5
Inventory Valuation:	101.6	103.4	105.9	+2.7
Cumulative Index:	114.4	116.1	118.8	+2.7

(Base year is 1976 where all shipment levels were indexed at 100)

The Distribution Index for September indicates that the distribution industry is responding well to the upturn in the economy. Truck shipments will reach their highest level for any period in 1983, climbing to 122.3 through October. Rail shipments are expected to increase 1.7 points over the September levels, reaching 113.6. Air shipments have out performed all of the other transportation modes throughout the year and will rise to 119.7 in October. Shipments by water have been slower to recover, but will grow by 1.3 points over September to the 109.6 level in October. Warehouse space utilization, which is a solid indicator of inventory build-up, will reach 119.4. Inventory evaluation, which reflects inflationary pressures as well as inventory levels, will rise to 105.9 reflecting the continuing upward push on prices. The cumulative index for the period shows a robust increase of 2.7 points over September, rising to a level of 118.8 for the beginning of the fourth quarter.

TRANSPORTATION INDICATORS—

Monthly/Quarterly Trends

Diesel Fuel Prices (Cents per Gallon/Average)
(Interstate Commerce Commission)

Jun.83	Jul.83	Aug.83	Nov.83 (Forecast)
1.20	1.20	1.20	1.22

Dow Jones Transportation Index (Index Point Closing)
(Wall Street Journal)

Jul.15	Aug. 1	Aug. 15	Nov.83 (Forecast)
561.5	548.3	534.6	604.0

The distribution industry will receive a little bit of bad news along with the generally favorable economic news. The first negative trend is the gathering pressure on diesel fuel prices, which have been steady for most of the year. During the summer, the per gallon price averaged about $1.20, according to the Interstate Commerce Commision. We expect fuel prices to climb during the fourth quarter to about 1.22 per gallon. The Dow-Jones Transportation index, which gives a good indication of carrier earnings expectations four to six months in the future, has been erratic of late. The trend has been up during the year indicating that earnings, and thus rates, could increase. Despite a few plunges this summer, we expect the index to climb over 600 by year's end.

RAIL

TWO RATE SCALES FOR GRAIN?

In the Law column of *DISTRIBUTION's* May 1983 issue, Colin Barrett devoted a few paragraphs to rail deregulation. When specifically discussing boxcars, he said: "When it comes to boxcar movements, which were also deregulated, a more subtle problem revolves around grain shipments during peak periods, when boxcars (with special grain doors) are used to supplement the carriers' covered-hopper fleets. Railroads have a fair amount of discretion as to the type of equipment they furnish shippers—and since grain moving in covered hoppers remains regulated, they'll be able to unilaterally decide whether specific grain shipments will or will not be subject to ICC jurisdiction. It wouldn't be surprising to see two entirely separate grain rate scales develop, depending on which equipment a railroad chooses to make available to the shipper."

James A. Hagen, senior vice president—marketing and sales for Conrail, took acception to this statement. He sent us a copy of a letter written by Charles N. Marshall, general counsel—commerce for Conrail, to the Honorable Reese Taylor, chairman of the Interstate Commerce Commission (ICC). Here is most of that letter: "The . . . tables (see box) . . . show that boxcars have been virtually eliminated as a grain transportation vehicle in North Dakota. Although almost half the cars supplied in 1979 were boxcars, the boxcar share in 1981 was only 3.4 percent. This decline in boxcar share and tonnage occurred at the same time that total rail tonnage was increasing.

"The unfortunate fact for boxcar owners is that the cars have become obsolete for grain haulage because of their labor-intensive cooperage requirements. I am sure that deregulated boxcar owners would eagerly offer their thousands of idle cars to grain shippers, but I suspect that most grain shippers would be unwilling to use them at any price.

"Conrail does not foresee any measurable return of grain traffic to boxcars whether or not deregulation occurs."

U.S. Dept. of Agriculture—Grain Shippers From North Dakota

Bushels (Millions)				Rail Traffic Distribution	
Period	Total Grains	Rail	Truck	Cov. Hop.%	Box%
1980-81	401.0	251.9	149.1	88	12
1979-80	476.0	294.3	181.7	71	29
1978-79	456.0	271.0	188.0	83	17
1977-78	358.5	235.1	123.4	63	37
1976-77	312.0	205.1	107.0	46	54
1975-76	320.1	236.4	83.7	38	62

Source: Upper Great Plains Trans Institute, ND State University Report 42, March 1982, Eugene C. Griffin, director.

ND Wheat Commission
ND Public Service Commission

Hagen said, "The main reason boxcars are no longer used for shipping grain has to do with loading and unloading technology. Loading grain into boxcars is not nearly as efficient as loading hoppers, but the real inefficiencies of using boxcars for grain is in the unloading.

"Receivers of grain used to have huge devices that would turn boxcars on their sides and empty out the contents like a salt shaker. These devices are now just too slow and too expensive. Large grain receivers need hoppers that can unload from the bottom. As unit trains come into the yards of the receivers, they roll over enourmous pits. The grain is dumped out the bottom while the cars are still moving."

Hagen added, "I don't believe that rates could ever get so low that people would actually be interested in using boxcars again."

This photo, circa 1972, shows a grain-filled BN boxcar being unloaded at a Kanasas City terminal elevator.

BURLINGTON NORTHERN
BN

By 1975, it was easy to see that hoppers were much more efficient for loading and unloading.
Photos by Burlington Northern

COMPUTERIZATION
Where Are We ?

Just about every shipper in the country is using computers to automate SOME portion of the physical distribution cycle, but a recent survey by the leading research firm shows that most shippers are just computerizing clerical functions. Even the largest companies are just beginning to use computers to do planning and controlling functions.

by Tom Foster,
Editor-in-Chief

Computerization is where the action is today in physical distribution management. Just about every industry meeting, trade show or seminar focuses some, or all, of its attention on software and computer services. Our readers tell us they can't get enough information about the role of computers in transportation and distribution.

But with all this smoke, just how hot is the fire? How computerized is the transportation and distribution industry today?

Well, we are not as sophisticated as we would like to think, according to a consulting group called the Management Analysis Center (MAC), which just completed one of the most ambitious studies of computerization of distribution ever done. The MAC study took six months and involved interviews and detailed mail responses from 325 shippers, carrier associations and vendors. The end result of the study is a 200-page report covering every aspect of computer use in the freight industry. MAC thinks the survey results are so important that it is only available to subscribers at a hefty price tag of $7,500 per customer. MAC, however, has allowed *DISTRIBUTION* to share a few findings.

"The Implications of Information Technology in the Freight Transportation Marketplace" was prepared by the consulting firm, Management Analysis Center, headquartered in Cambridge, Mass. The survey was directed by four independent educators: Bernard J. LaLonde, Riley Professor of Marketing and Logistics at Ohio State University; D. Daryl Wyckoff, James J. Hill Professor of Transportation at Harvard University; Gayton Germane, 1907 Foundation Professor of Logistics at Stanford University; and Nicholas A. Glaskowsky, Jr., Professor of Logistics at the University of Miami. The final report was prepared by Peter T. Bower, vice-president of MAC in Washington, D.C. Complete copies of the 200-page report are available only on a subscription basis from MAC.

"Some of the results may seem obvious, but the conclusions will probably be controversial because the study clearly shows that the industry as a whole has a long way to go," says Peter T. Bower, MAC's vice-president of transportation consulting. "The majority of shippers use computers for some aspect of their trans-

continued

CURRENT USAGE OF COMPUTER SYSTEMS—ALL CORPORATIONS

	Percent of All Corporations* Already Computerized	Rank
EXTERNAL SYSTEMS		
Pre-transaction		
Rates	25%	5
Transaction		
Order Entry	57%	1
Bill of Lading	36%	4
Trade Documentation	11%	11
Invoicing	54%	2
Freight Bill Payment	37%	3
Shipment Tracing	10%	12
Rail Car Location	5%	16
INTERNAL SYSTEMS		
Pre-transaction		
Routing	20%	7
Route Optimization	10%	13
Consolidation	13%	10
Site Location	4%	17
Rail Costing	3%	18
Post-transaction		
Freight Bill Pre-audit	14%	9
Freight Bill Post-audit	19%	8
Transportation Cost Analysis	23%	6
Private Fleet Management	7%	15
Freight Budget	8%	14

*Note that these percentages relate to all shippers with sales in excess of $5 million in selected SIC codes (see Appendix B for sample description).

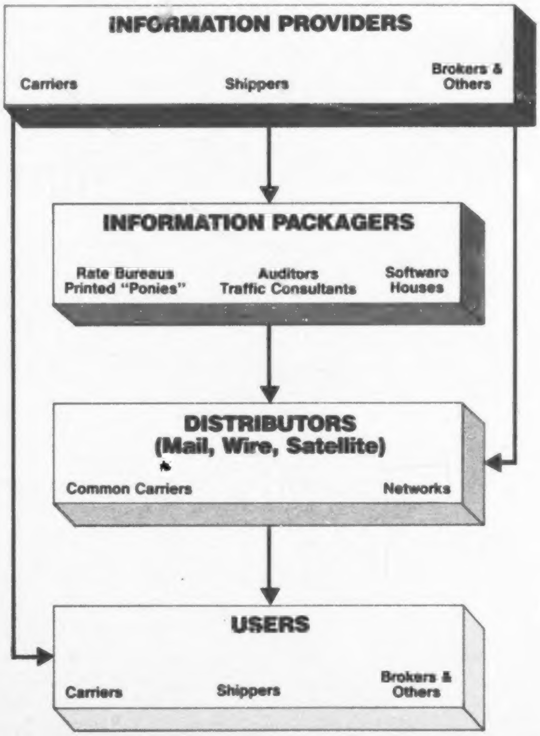
This chart shows the extent of current computer use by shippers, and how these systems are ranked in terms of use. The five most frequently computerized functions are: order entry, invoicing, freight bill payment, bill of lading preparation and rating. These are all clerical functions done by the shipper in his day-to-day business. The least computerized functions are: rail costing, site location, railcar location, private fleet management and freight budgeting. These are mostly planning functions that can be done without computers or not at all. Another way of looking at this chart shows that functions that take place during a transaction or afterwards, such as freight payment or order entry, are more often computerized. The pre-transaction, or planning, functions are less often computerized. Although greater savings in distribution costs can probably be gained by giving more attention to planning functions than to transactions, the lure of reducing clerical costs seems to dominate shipper implementation of computerization.

portation distribution operations. But these companies as a group use the computer primarily to communicate with other company facilities and use it to communicate with customers for applications such as order entry or shipment inquiry.

"We use the terms external and internal when describing shipper use of information technology. Briefly, external functions are closely tied to the physical movement of freight, and usually involve some infor-

continued

FREIGHT INFORMATION INFRASTRUCTURE



This chart shows two other important dimensions of freight functions: time and type of decision. Time refers to whether a specific freight function takes place before a transaction, during the transaction or after it. Type of decision means whether it involves planning (strategic), controlling (tactical), or processing (operational). Usually, planning decisions are made by high level managers; controlling decisions are made by middle managers, and processing decisions are made at the clerical level. The freight functions that are most often computerized tend to be at the transaction stage and involve processing or clerical decisions. The most sophisticated shippers surveyed, however, were not restricted to this isolation of computerization at the lower levels of management. At these companies, computerization evolved to the higher management levels, as well as handling operational and tactical functions.

mation transfer between parties to the transaction and are required for the shipper to conduct day-to-day business. These would be order processing, freight payment, bill of lading preparation, etc.," explains Bower. "Internal functions tend to be optional activities. They do not involve any transfer of information and are primarily analytical in nature. Shippers concentrate on these external systems.

"The five most frequently computerized functions are order entry, invoicing, freight payment, bill of lading preparation and rating," says Bower. "These are all external, clerical functions. Even the systems that shippers expect to add reflect this emphasis on external systems. The five systems most likely to be added to or enhanced over the next three years are invoicing, bill of lading preparation, rating, routing and freight bill auditing."

An important finding of the MAC report is that there continues to be a tremendous gap in sophistication between large and small shippers, says Bower. "The middle market and lower Fortune 1000 companies apparently plan to automate the internal, analytic and planning functions they have been performing manually," says Bower. The Fortune 500 shippers have already been down this path and are either satisfied with what they have or do not expect further benefits from internal systems. They are turning their attention again to external systems that will permit electronic data interchange (EDI) of orders and bills. They are looking for a whole new generation of these external systems.

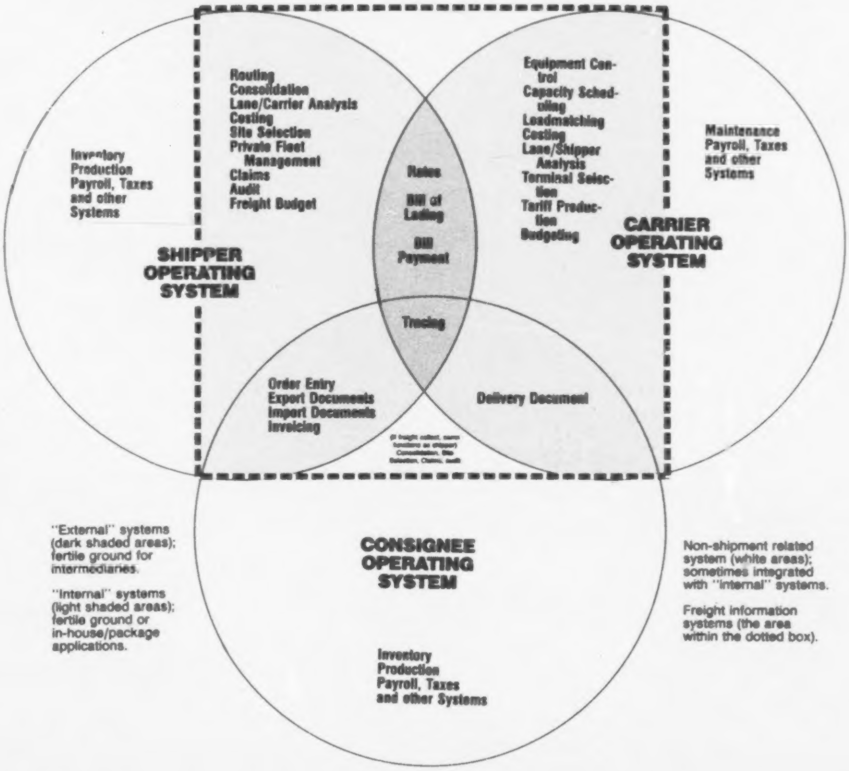
"The small shippers, on the other hand, have little time for planning and analysis," says Bower. "They lack the leverage to take much advantage of analysis even if they could do it, so they are sticking with required external systems like order entry or invoicing. But these shippers are struggling with the first generation of external computer systems, while their big brothers in the Fortune 500 are looking at their second or third generation of external systems"

According to the MAC study, the increasing use of information technology in distribution is being driven by four factors:

TECHNOLOGY—increased availability and capability at a reduced cost for both data processing and communications;

continued

FREIGHT INFORMATION SYSTEMS


Inventory
Production
Payroll, Taxes
and other
Systems
Routing
Consolidation
Lane/Carrier Analysis
Costing
Site Selection
Private Fleet
Management
Claims
Audit
Freight Budget
Rates
Bill of
Lading
Bill
Payment
Equipment Control
Capacity Scheduling
Loadmatching
Costing
Lane/Shipper
Analysis
Terminal Selection
Tariff Production
Budgeting
Maintenance
Payroll, Taxes
and other
Systems
SHIPPER
OPERATING
SYSTEM
CARRIER
OPERATING
SYSTEM
Tracing
Order Entry
Export Documents
Import Documents
Invoicing
Delivery Document
(If freight collect, same functions as shipper) Consolidation, Site Selection, Claims, audit
CONSIGNEE
OPERATING
SYSTEM
Inventory
Production
Payroll, Taxes
and other Systems
"External" systems (dark shaded areas); fertile ground for intermediaries.
"Internal" systems (light shaded areas); fertile ground or in-house/package applications.
Non-shipment related system (white areas); sometimes integrated with "internal" systems.
Freight information systems (the area within the dotted box).

MAC study divided freight activities into "external" and "internal" functions for shippers, carriers and consignees. The external functions are those that involve at least two parties and are illustrated in this chart by the areas where the circles overlap. These external activities tend to be "must-do" functions. Shippers, for instance, have to do order processing, bill of lading preparation and pay freight bills. These external functions are the ones that are most highly computerized. Internal functions are often optional and are not required to get the freight off the dock. Shippers, particularly small ones, often operate without rationalizing routing decisions and auditing freight bills, or they do these activities manually. Becuase these internal functions are often optional, they are less often computerized. From a financial management view point, the external functions have a payback potential that is easy to justify as a computerized system, almost regardless of cost. It is harder to cost-justify computerized planning functions.

COMPUTERIZATION

PRODUCTIVITY—top management view that transportation is a tangible, quantifiable input that should be able to demonstrate productivity and importment;
ASSET USE—top management awareness that transportation can affect asset employment such as inventory and receivables cash flow;
DEREGULATION—increased options, increased risk, increased potential to affect the bottom line in either direction.

"These forces are working on the transportation and distribution managers," says Bower, "and they are changing their jobs dramatically. Transportation used to be easy to measure, stable, and had little impact on other departments or overall profitability. Now, transportation is hard to predict, unstable, and it has great impact on company strategies and profitability. Faced with these uncertainties, transportation managers are turning to information systems to provide answers to questions raised by top management and to avoid operational problems."

Bower mentioned three other findings important to shippers.

"More than half of all shippers, regardless of size, will definitely or probably use EDI for customer invoicing in the next five years." says Bower. "What's more, three-quarters of all shippers expect to communicate directly with carriers to obtain and exchange information, and one-quarter expect to rely on intermediaries to funnel information to them from various carriers.

"Computerization, even at the clerical level usually doesn't result in staff reductions according to what most companies have told us," says Bower. "There are certainly productivity gains, but the myth that people are replaced when computers are introduced was exploded by our research.

DISTRIBUTION cannot comment on the value of the total report to shippers, let alone recommend spending $7,500 for a single copy. We do think shippers should be interested in this survey for reasons beyond simple curiosity.

Effective computerization of distribution activities can not only save a shipper time and money, it can be a valuable marketing tool that allows a company to give customers better service than competitors. Unless a distribution department knows how sophisticated it is compared to its competitors, it could find itself at a disadvantage in the marketplace.

Distribution managers who want to introduce new or improved computer services have to sell their top mangement. Thorough research, such as that in the MAC report can help the distribution manager make a better case.

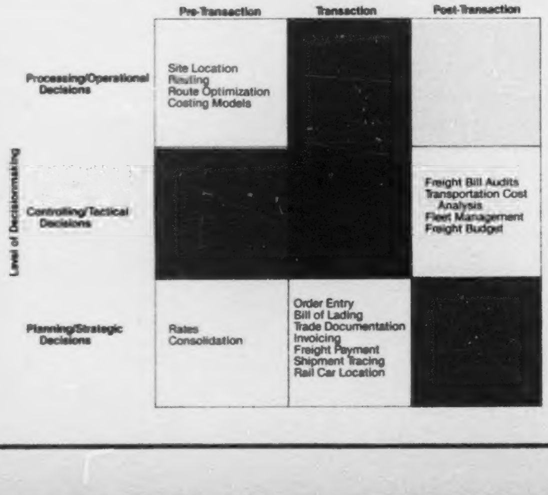
Distribution departments that are facing problems in productivity and work flow often don't know where the problems really lie. To get to the root of the problem usually requires the services of a professional consultant, either from within the company or from the outside. The MAC report can't pinpoint these individual problems, but it does show very clearly where data-oriented bottlenecks exist at different types of companies. These generalizations could prove valuable to a shipper that is trying to find his own problem areas, and show how other companies used computerization to straighten them out. ■

ANNOUNCING DISTRIBUTION'S COMPUTER UPDATE NEWSLETTER

There is so much happening in the world of computer applications to transporation and distribution that few people in our industry can keep up. *DISTRIBUTION* has a similar problem. We have so much news and advice to offer you that we don't have enough room in our monthly issues to publish it all. But we also have a solution. To keep you on top of this important and fast-changing field, *DISTRIBUTION* is starting **COMPUTER UPDATE**, a newsletter exclusively devoted to coverage of computer software, systems and services for professionals in all aspects of physical distribution management. Each issue of **COMPUTER UPDATE** will include:

- Detailed listings of new software and services;
- Field tests of the most popular systems;
- Case histories of successful systems;
- News from industry groups and associations on computerization;
- Coverage of seminars and meetings on new trends and products;
- Expert advice on selecting computer packages and services;
- Technical tips on implementing computers into your department.

DISTRIBUTION'S **COMPUTER UPDATE** will be published every other month and will cost $75 per year. Charter subscriptions at $50 are avilable until the end of 1983. For further information, fill out the card on page 133 and send it back to us today.



Level of Decisionmaking	Pre-Transaction	Transaction	Post-Transaction
Processing/Operational Decisions	Site Location Rating Route Optimization Costing Models		
Controlling/Tactical Decisions			Freight Bill Audits Transportation Cost Analysis Fleet Management Freight Budget
Planning/Strategic Decisions	Rates Consolidation	Order Entry Bill of Lading Trade Documentation Invoicing Freight Payment Shipment Tracing Rail Car Location	

PRODUCT POSITIONING

Timeframe for Decisionmaking

To make freight information technology work as smoothly as this diagram suggests will require common data standards, which are still in the development stage for the whole freight industry. Because of the vast diversity in both shipper and carrier size and information sophistication, many forms of communications operate side by side, and often overlap or are incompatible. Intermediaries who can perform a translation or switching role have grown up to compensate for lack of standardization in the industry. The use of common data interchange standards is spreading, but for some time to come, many large shippers will continue to maintain their own systems and will depend on third-party intermediaries to allow them to communicate with the other parties in the freight marketplace.

Chilton's

OCTOBER 1983

DISTRIBUTION

FOR TRAFFIC & TRANSPORTATION DECISION MAKERS

10-1

MS SUSAN GARNER
CONGRESSIONAL INFORMATION SERVICES
4520 EAST-WEST HIGHWAY
BETHESDA MD 20814

NEW DIRECTIONS IN INTERNATIONAL DISTRIBUTION

PUTTING TOGETHER A WINNING INTERNATIONAL TEAM

CUSTOMER SERVICE: SALES UP, COSTS DOWN

VOLUME 82, NUMBER 10
OCTOBER 1983

Chilton's
DISTRIBUTION

FREDERICK A. STANLEY, PUBLISHER
ESTABLISHED 1901 AS THE *TEAMSTER*
CLIFF MITCHELL, CIRCULATION MANAGER

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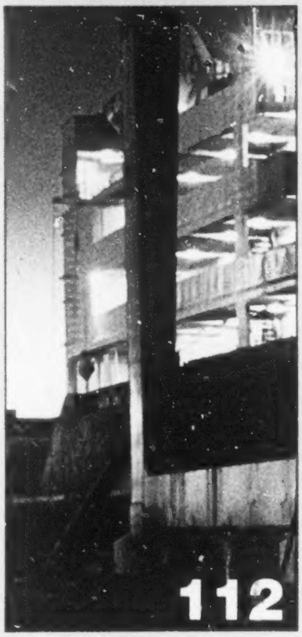

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DIALOGUE

'IF THE SHOE FITS . . .'

Readers had some strong reactions to our questions in June about the fairness of the new schedule of federal truck taxes:

"If the shoe fits, wear it. The heaviest trucks, due to their size, length and weight, do their fair share of damage to the highways. They need to shoulder their share of the expense to maintain our highways."—**Dennis Webber, traffic manager, Interstate Brick Co., West Jordan, Utah.**

"Truckers are treated very unfairly, even by most shipping firms."—**R. Richardson, Gadsden, Ala.**

"Generate the needed money by increasing all fuel taxes, not just diesel. All America benefits from better roads, not just truckers."—**Doug McKenna, president, Desert Valley Moving, Lemoore, Calif.**

"Truckers have never paid their fair share; it is about time they did."—**Unsigned.**

"Probably the fairest tax would be some kind of federal ton-mile tax which would be paid out to the state governments on a pro rata basis. The main problem with this would be the states that would not want to give up some income."—**John W. Pope, traffic manager, American Tank & Fabricating, Cleveland.**

"The anti-truck folks—primarily railroads and auto clubs—have so propagandized the public that state officials almost feel obliged to continue raising taxes on heavy trucks. In the case of interstate trucks, that power should be taken away from them and vested in the federal government, with reimbursement to the states on a ton-mile basis."—**James R. Duffrin, traffic manager, Newell Companies, Inc., Freeport, Ill.**

"All taxes on shipments in interstate commerce should be regulated by the federal government regardless of disbursement methods to the states, because the consumer, in reality, is the ultimate payer of all taxes."—**F.J. Alexander, vice president, Trinity Industries, Inc., Dallas.**

"Studies have shown that interstate highways have a life expectancy of 20 years. Time, not trucks, has worn out the roads. Trucks should not pay to subsidize poor road maintenance."—**James J. Paule, traffic manager, Spangler Candy Co., Bryan, Oh.**

"One federal license would alleviate many record-keeping problems for carriers. The states can rely upon their fuel taxes for revenue."—**James J. O'Donnell, manager-transportation, Amchem Products Inc., Ambler, Pa.**

(continued on page 8)

TRUCK TAXES

Taxes in Surface Transportation Assistance Act are fair	30%
These taxes are unfair	63%
Which alternatives do you support? Keep present fuel/excise tax, but increase registration fees	9%
Same as above, but prorate registration fees depending on mileage	15%
Same as first, but increase registration fees on heaviest trucks	4%
Same as first, but base registration on ton-miles	24%
Raise federal taxes for heaviest trucks	13%
Raise federal taxes for all trucks	30%
Truck taxes in my state are unfair	41%
Are not unfair	41%
I favor a 50-state federal license	80%
I don't favor a federal license	15%

QUESTION OF THE MONTH

Every October, we try to fling open the doors to international trade and let in some new light. And every October, we survey you, the readers, to flesh out just what is going on in American companies that do business overseas.

On page 54, you'll find the results of one such survey. Now we want you to add your two cents to some of the issues touched on by that survey, as well as some new ones that have cropped up in the meantime.

For example, just who is in charge of international trade there in Paducah, Ky.; Folcroft, Pa.; Klamath Falls, Ore.; Tyler, Tex.; and all points in between? Is international distribution the little brother getting hand-me-down directions from a domestic distribution department? From marketing? Or from purchasing?

Who do you report to? Do you clear your plans through the domestic distribution department? Or do you go directly to top management? And speaking of management, what is the management level of the highest-ranking person in international distribution?

Now that you've helped us figure out the management structure, tell us what kinds of operations you get involved with. Exporting? Importing? Shipping to a foreign subsidiary? Offshore production and assembly?

And if you're inking in the blanks on this survey, then you must also be battling every day with some of the following: a strong dollar, protectionism, tightened export controls, worldwide recession and a currency/credit crisis. How have you been battling those obstacles? Are you squezzing forwarders to get the last penny off your delivered cost?

Have you found that the nowly created foreign trading companies shrink your costs? Are you facing protectionist policies overseas?

Please take a minute, turn to page 129, and give us a look at what is going on from all across America to all over the world.

TO THE EDITOR

I have just had an opportunity to review your financial profile of railroads which appeared in the August edition of *DISTRIBUTION*.

Generally speaking, I thought it was an excellent summary of the current situation. I was concerned, however, with the following paragraph:

"But totally non-rail-related investments do worry shippers. The holding company for the Atchison, Topeka & Santa Fe Railway, for instance, is investing $140 million over six years to begin mining its own coal reserves in New Mexico's San Juan Basin. The holding company for the Santa Fe already gets 38 percent of its pre-tax earnings and 14 percent of its profit from non-rail business."

That paragraph immediately followed a paragraph which questioned whether railroads were spending money on non-rail projects to the detriment of their rail operations. I think it is unfortunate that you incorrectly singled Santa Fe out in this manner. As far as I know, no knowledgeable person has accused Santa Fe of neglecting its railroad in favor of other operations in the past, and we have every intention of maintaining high standards in the future.

In the first place, Santa Fe Railway is not making any of this investment, except for some rolling stock. Some $79 million was slated for mine construction by SF Coal Company, which is totally separate from our railway operations. That $79 million includes a loop track and a 12-mile rail spur.

An additional $45 million was slated to construct the first portion of the Star Lake Railroad (which is hardly an indication that funds were being diverted from railway purposes). That investment was scheduled to be made by a limited partnership composed of two Santa Fe industries subsidiaries and a shipper. Santa Fe Railway planned to purchase nine locomotives and 117 hopper cars, at a cost of $15 million, to handle the initial coal shipments.

While mine development has gone ahead, the Star Lake Railroad picture is somewhat cloudy at the moment, and it is possible that a private spur track may be built, instead of a common carrier railroad, because of some right-of-way problems.

In summary, I believe it was unfair to suggest by innuendo that a legitimate investment by any subsidiary of Santa Fe Industries in some way was detrimental to our railway operations.

In addition, an analysis of the particular investment you chose as an illustration clearly reveals that a good portion of this investment is rail-related.

Finally, I am at a complete loss to guess where you obtained your statistics that 38 percent of our pre-tax earnings and 14 percent of our profit came from non-rail operations. Since we do not report profit company-by-company, but rather on a consolidated basis, there is no way I can comment on the "profit" statistic you quote. On the basis of consolidated pre-tax income, however, last year our railway operations contributed only about 14 percent, with the balance of our operations contributing approximately 86 percent. Last year was not really typical, since it was a down year for railway operations. ☐

Robert E. Gehrt
Assistant Vice President
Public Relations
The Atchison, Topeka and
Santa Fe Railway Company
Chicago, Ill.

(continued from page 7)

"Commerce is interstate. Trucking is interstate. Truck taxing must be interstate for federal uniformity."—**H. Nicholls, transportation manager, R.R. Donnelley & Sons, Warsaw, Ind.**

"Raising fuel taxes makes users pay according to the amount used. Also, put an extra charge on registration fees for vehicles over 60,000 pounds."—**K.E. Lewis, president, Lewis Storage, Greensboro, N.C.**

"I support a 50-state license so long as provisions are made for carriers with regional-only operations. Taxes must be on a pay-as-you-go basis, i.e., fuel taxes."—**William Dellinger, traffic manager, Draper-King Cole Inc., Milton, Del.**

"It is important to have interstate truckers taxed only at the federal level, for a federal plate, and federal fuel taxes. The states' taxing authority should be preempted."—**G.K. Bishop, president, Genie Trucking Line Inc., Carlisle, Pa.**

"The idea is user fees. A fuel tax would also tax diesel cars; trucks cause the most wear on our highways."—**Joseph A. Mylic, traffic manager, Kero-Sun, Kent, Conn.**

"Considering the cost to rebuild highways and bridges, funds must come from the heaviest trucks that cause the damage."—**Unsigned.**

"I suggest there be uniform state taxes, and a 50-state license for interstate carriers and similar options."—**Ray Griffin, traffic manager, Tasty Bird Foods, Russellville, Ark.**

"I would like to see all trucks weighed upon entering the interstate highway system. When they leave, they should pay a weight and distance toll. Let's eliminate the fuel tax, too many get around it."—**L.A. Paulsen, owner, Professional Distribution Consultants, Dix Hills, N.Y.**

"The problem with state taxes and registrations for interstate carriers is that in many states, such as Connecticut, these funds do not go into highway funding."—**A.J. Melzer, manager of field warehousing, Pitney-Bowes, Newtown, Conn.**

"The taxing of only for-hire carriers is unfair. An equitable tax for all trucks is sensible as well as competitive."—**Val Dodd, senior vice president, Interamerican, Los Angeles.**

"Greater uniformity from state-to-state of tax forms and requirements is needed; also, a central filing and collection point for all states."—**Bryan W. Ray, traffic manager, Farmers Marketing Assn., Denver.**

"Drop the present law and only put on a fuel tax at the pump. Trucking companies will start to tell shippers either what states they will go to, or they will change the rates for different states."—**Victor Martin, area manager, Schilli, Monroe, Oh.**

"A low-density shipper shouldn't have to pay for the damage to highways caused by heavily loaded trucks."—**Unsigned.**

"All 48 states must get together and federalize the trucking fees. We are being killed with a minimum of 48 different truck taxes."—**Peter F. Costello, general manager, Maid-Rite Steak Company, Inc., Dunmore, Pa.**

FORECAST

BY DR. RICHARD LANCIONI

PRIME RATE IS NOW OF PRIMARY CONCERN

In a recovery, traditional economists would argue, it's important for the government to borrow. As past practices have shown, borrowing fuels the comeback and reduces unemployment. And this, in turn, helps restore prosperity.

But in this upturn, economists are faced with a new set of circumstances. If the federal government borrows and increases spending, the deficit will grow faster then it already has, and force interest rates up. That in turn would choke off business investment and reduce consumer spending.

In effect, the economy is now more sensitive to interest rate levels then it has ever been. Business managers are not watching consumer demand; instead, all eyes are on the prime rate.

For distribution managers, such a situation creates increased demands on them. Any improvements in distribution operations will require that the distribution manager justify additions on the basis of rate of return to the firm, rather than the level of market support that would be provided.

Any expenditures by business firms will be more affected by the prime rate than by market opportunities. The lag time between when interest rates change and when some trend in the overall economy is noticed is becoming shorter.

As an example, when mortgage rates increased from 12.5% to 14% in July-August, new homes sales dropped by 6.5% in the same period. At the same time, when the prime rate increased from 10.5% to 11%, capital expenditures dropped by 4.4% in the same period.

Distribution managers should begin to keep an eye on the prime rate and factor it into their planning cycle. As one distribution manager stated, "My company management is increasingly gun-shy about interest rates. I think it reflects confidence more than anything else for our firm. If interest rates are stable for a period, we know how to plan and operate. If they fluctuate, we're in trouble." ☐

DISTRIBUTION INDEX FORECAST INDICATORS

	Sep.83	Oct.83	Nov.83	Point change from Previous Period
Truck Shipments:	120.3	122.1	124.6	+2.5
Rail Shipments:	111.9	113.6	114.9	+1.3
Air Shipments:	117.2	119.7	121.2	+1.5
Water Shipments:	108.3	109.7	111.3	+1.7
Whse Space Utilization:	116.7	119.4	122.8	+3.4
Inventory Valuation:	103.4	105.9	106.3	+0.4
Cumulative Index:	116.1	118.8	120.9	+2.1

The Distribution Index for the month of November is showing some signs of slowing, reflecting the moderating trend in the economy. Truck shipments will rise to 124.6, reflecting a 2.5 point increase over October. While this reflects a strong trend in the Trucking sector, it is less than in past periods. Rail shipments are also expected to slow down and reach a level of 114.9 in November. Air shipments, generally the strongest component of the Index, will increase by only 1.5 points through the period. Water shipments of bulk materials are also registering a slow recovery. In contrast to the other sectors, warehouse space utilization continues to increase, reflecting the increasing buildup in inventories. It will rise to 122.8 through the fourth quarter. A good sign is the slow increase in inventory valuation, which reflects the moderating trend in inflation as the year ends. The inflation rate for all of 1983 should be below 6.5%. The overall cumulative index for November reflects the general slowdown, with an increase of a modest 2.1 points, to 120.9.

TRANSPORTATION INDICATORS—

Monthly/Quarterly Trends

Diesel Fuel Prices (Cents per Gallon/Average)
(Interstate Commerce Commission)

Jul.83	Aug.83	Sep.83	Dec.83 (Forecast)
1.22	1.22	1.23	1.25

Dow Jones Transportation Index (Index Point Closing)
(Wall Street Journal)

Aug.15	Sep. 1	Sep. 15	Dec.83 (Forecast)
534.6	553.3	563.4	614.4

Rail Freight Traffic (Billions of Ton Miles)

1st qtr.	2nd qtr.	3rd qtr.	3rd qtr. 82
195.4	401.7	562.1	563.7

The transportation indicators continue to demonstrate the slow but gradual growth in the economy. Diesel fuel prices will continue to remain relatively constant, but will begin to rise toward the end of the year and could go as high as $1.25 per gallon. It is likely that diesel prices will again moderate in early 1984. The investor community is regaining its confidence in major transportation stocks, presumably because it expects earnings and rates to rise in the months ahead. The Dow Jones Transportation Index should easily break the 600 barrier by the end of the year, indicating that transportation rates are likely to rise within the next six months. Rail freight is picking up in most commodity areas, according to the Association of American Railroads. Ton-mile figures for the first and second quarters were off by nearly five percent from last year, but in the third quarter, ton miles have come within 0.3 percent of the 1982 levels. Only coal loadings are substantially below 1982 levels now, and by the end of the year, total ton miles should exceed 1982 levels. Watch for major jumps in 1984 rail traffic.

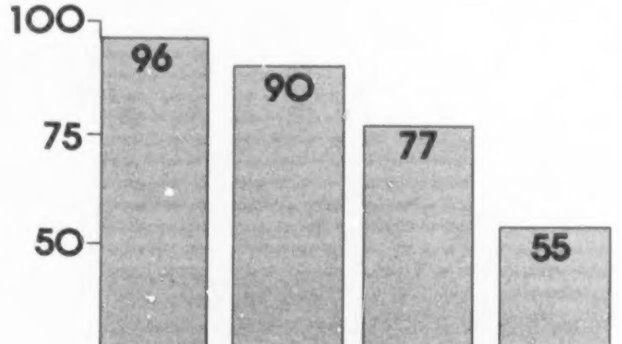
TRENDS IN INTERNATIONAL DISTRIBUTION

by Thomas A. Foster, Editor-in-Chief and Nancy Entwisle, Associate Editor

The world is teetering on the edge of economic collapse.

At any moment, dozens of financially weak countries could could cause the world banking system to collapse by defaulting on hundreds of billions of dollars of debts owed to banks in the industrialized world.

If these countries defaulted, all world trade would come to a halt. Oil, food and other vital commodities would cease to move to the countries that need them. Almost every industry dependent on exporting or importing would fail. More than half the world's currencies would lose all value.



Virtually every one of the 100 companies surveyed was active in more than one of the international activities noted on this chart. Traditional export and import activities accounted for the majority of the international activity, but a surprising proportion of companies (77 percent) use foreign subsidiaries to handle their international buying and selling in certain markets and more than half of the companies are now using offshore production. There definitely seems to be a trend toward handling international activities from beyond our borders because of pressure from foreign governments to invest in manufacturing and distribution facilities in these nations. If a U.S. company wants to do business in certain countries, it must become a multinational. The degree of responsibility of the U.S.-based distribution executivies in these foreign business ventures varies widely from industry to industry. In high-tech fields, there seems to be a high degree of direction from distribution executives in the U.S. In other industries, the foreign operations are more autonomous.

There would be a mad grab for assets belonging to debtor nations. In retaliation, these countries would seize property of U.S. subsidiaries and multinationals. The intricate worldwide economy would burst like a balloon. More than likely, revolution and anarchy would reign in three-quarters of the world within a matter of months.

This scenario, of course, is the bleakest one being foretold only by the gloomiest of the doomsayers. The chances of anything like this happening are slim, indeed. But on the other hand, the situation is far more serious in world trade than most Americans realize.

There are structural changes taking place right now in the world economy that will soon have a dramatic impact on businesses across the U.S.

As these changes occur, they should ripple through to distribution departments, where the role of the department and its managers will also change.

The most obvious example is the mounting trade deficit. In 1983, imports will exceed exports in this country by $60 billion, nearly double 1981's $32 billion deficit. At the current rate, the trade deficit will probably reach $100 billion by 1984 and as much as $174 billion by the end of the decade.

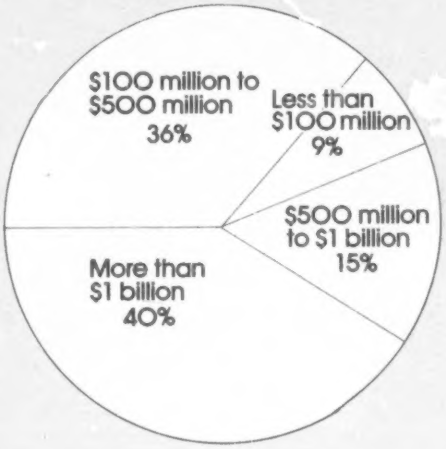
These mounting deficits provide unequivocal proof that we are losing our export market share for our products, and at the same time, foreign goods are gaining market share in our domestic economy.

To thwart this trend, U.S businesses are trying everything from

continued

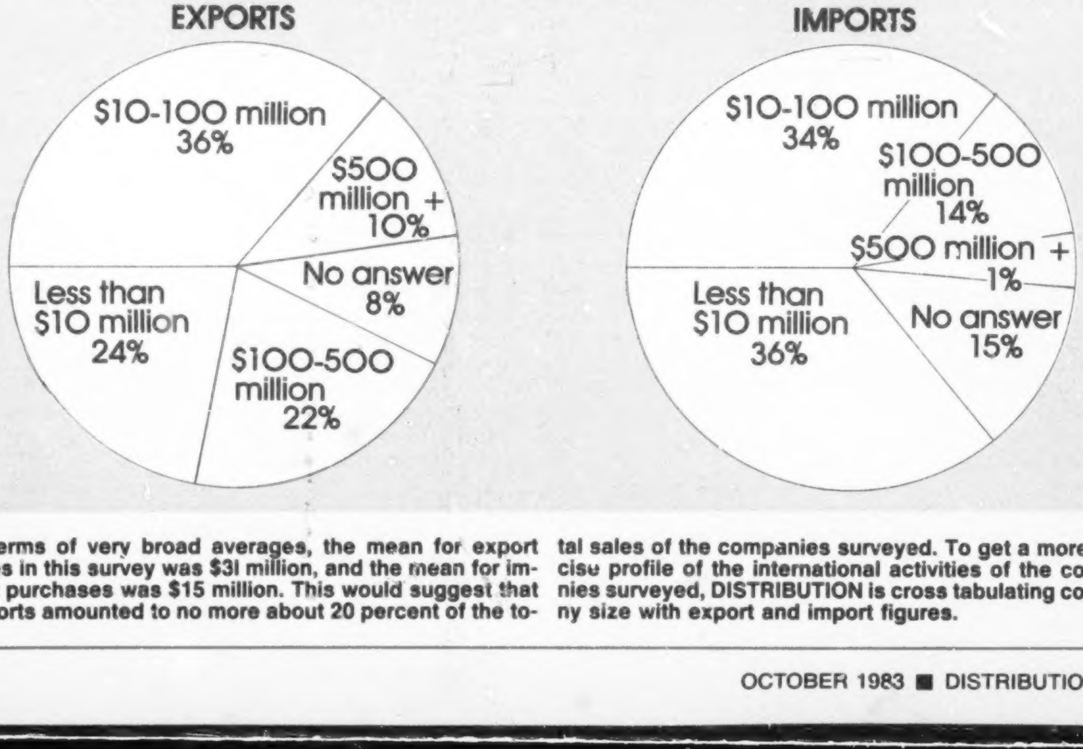
Upheaval in world trade is changing the way U.S. companies have to do their international business. But what is the impact of these changes on the role of distribution departments in exporting, importing and other international activity? This first annual survey of international distribution activity provides a unique profile of how companies organize their international distribution departments.

What Are Your Annual Corporate Sales?

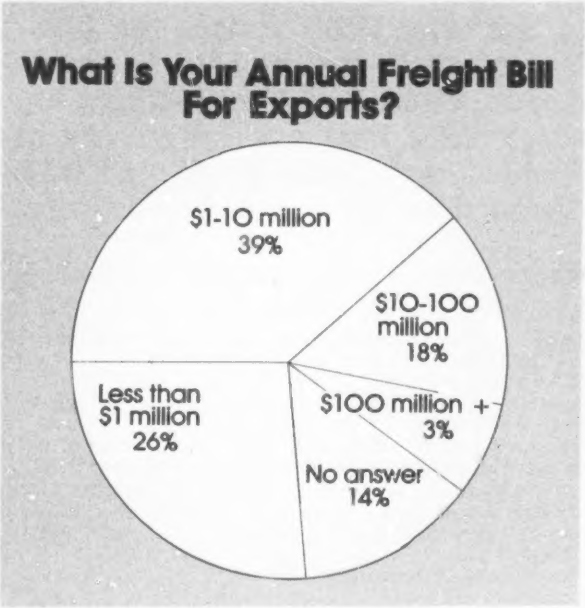


The 100 companies in this survey are a good cross section of the membership of the NCPDM, from which the sample was taken. The emphasis is definitely on the large manufacturers, wholesalers and retailers with sales of more than half a billion dollars. More than half the companies surveyed fell into this category and another third were medium-sized companies with sales of over $100 million. These are the types of companies that are already involved in international activities and will set the trends in the years ahead. According to the Department of Commerce, over 50 percent of our exporting and importing is done by fewer than 1,000 large companies, and 85 percent of our exports are done by fewer than 100 very large companies.

What Is The Value Of Your Company's Exports and Imports?



In terms of very broad averages, the mean for export sales in this survey was $31 million, and the mean for import purchases was $15 million. This would suggest that exports amounted to no more about 20 percent of the total sales of the companies surveyed. To get a more precise profile of the international activities of the companies surveyed, DISTRIBUTION is cross tabulating company size with export and import figures.


What Is Your Annual Freight Bill For Exports?

The average freight bill for the companies in this survey was over $4 million, or approximately 13 percent of export sales. This figure is not all that telling because the amount of money companies in this survey spent on moving their exports varied widely. There are three reasons for this, even though the bulk of the respondents were fairly large exporters. First, the value of the products shipped, and thus the rate levels, ranged from high-value electronics and pharmaceuticals to low-value chemicals. Second, the freight expenses for foreign subsidiaries were not included. Lastly and most important, the terms of sale for a large portion of the exports was F.O.B at some domestic point, so the cost of moving the goods was not considered an expense by these companies. Coupled with the fact that many of these companies sell to subsidiaries overseas, the figures these companies use to determine their export costs are not truly reflective. This tendency to sell on a domestic U.S. basis seriously disguises the true cost of moving goods internationally.

protectionist legislation to more foreign investment in countries where profits and productivity is high. These offshore locations not only provide a foothold in new markets, they also allow U.S. companies to "export" to the U.S.

The latter strategy is proving to be more successful, and larger companies are quickly beginning to rely more and more on joint ventures, overseas, foreign subsidiaries and offshore production and distribution facilities to conduct international business. Simple exporting and importing will become only part of U.S. companies' international business strategies.

As this trend grows, distribution departments are going to have to change what they do. They should become less involved with simple routing of shipments, carrier selection, and other traditional exporting and importing functions. They should become more involved with coordinating production and marketing activities among the firm's various worldwide locations.

But are these changes actually occurring in distribution departments for major companies in the United States?

To get an idea of how the changing world order is effecting the role of distribution deparments, *DISTRIBUTION* surveyed 100 leading companies involved in international business.

The survey is the first of an annual study that will look at the changing role of distribution in international business. On this first survey we wanted to find out:

- *How involved medium and large companies are in international distribution, including exporting, importing, offshore production and distribution and operation of foreign subsidiaries;*
- *How much of these companies' sales, profit and expense come from international activity;*
- *How these companies manage their principal international business activities;*
- *How distribution fits into the or-*

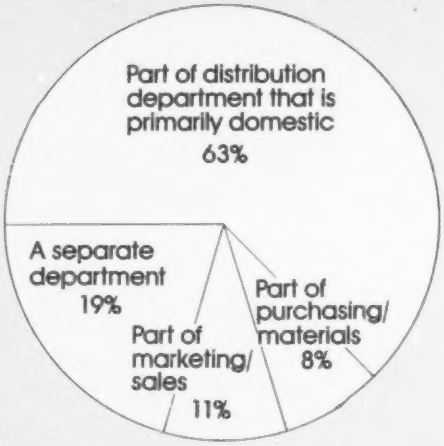
continued

TITLE OF PERSON INTERVIEWED

Director of Distribution	**(29)**
Manager of International Distribution	**(12)**
Traffic Manager	**(9)**
Director of Corporate Distribution	**(7)**
Manager of Physical Distribution	**(7)**
Director of Transportation	**(7)**
Director of Operations	**(6)**
Export Manager	**(6)**
Vice President of Transportation/Distribution	**(4)**
Transportation Director	**(3)**
Distribution Manager	**(2)**
Assistant Traffic Manager	**(1)**
Manager of Special Projects	**(1)**
Vice President—Materials	**(1)**
Transportation Supervisor	**(1)**
Import/Export Transportation Manager	**(1)**
Director of International Traffic/Transportation	**(1)**
International Distribution Manager	**(1)**
Vice President—Operations	**(1)**

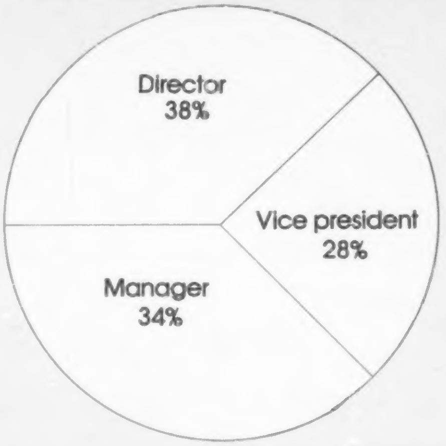
In the vast majority of cases, the person we spoke to was the actual manager in charge of that company's international distribution activity, thus the titles noted here are indicative of the level of management that is responsible for this activity. The most significant pattern seems to be that only 21 people had a truly international title, i.e., they had the word international, import or export in their title. The majority had general distribution, transportation or traffic titles.

How Is The International Distribution Function Organized At Your Company?



At nearly two-thirds of the companies surveyed, international distribution was handled by the same department that handled domestic distribution. In most cases, the same people handled both jobs. Only 19 percent of the companies had a separate international distribution department. These figures indicate that international business is not so important at most medium and large companies that management feels a separate international distribution department is necessary. At nearly 20 percent of the companies surveyed, a department other than distribution was in charge of international distribution. In the case of a marketing or sales department, however, most had a traffic or distribution manager in that department. There were at least nine cases where no distribution or transportation managers were directly involved in the international activity.

What Is The Management Level Of Highest Ranking Person Involved With International Distribution?



Besides knowing what department is ultimately in charge of international distribution, it is also important to know what level of management makes the international distribution decisions. The higher the level of management in charge, the higher the degree of importance the company puts on these decisions. The companies surveyed were fairly evenly divided with roughly a third of all companies surveyed each having a vice president, a director or manager in charge of international distribution. We were only able to speak to six of the 28 vice presidents who were designated as the person in charge of international distribution. The vice presidents who were too busy to speak to us or who were unavailable tended to have either a distribution or marketing title. In most of these 22 cases, the person we spoke to said the role of the vice president was primarily a link to top management with little, hands on involvement.

ganization of companies' international activities;

- *What the specific duties and responsibilities are for distribution departments involved with various types of international activities;*
- *Whether these patterns are changing and what forces are causing the change.*

The companies surveyed all have top distribution executives in the National Council of Physical Distribution Management. Several of the companies interviewed have annual sales under $100 million, but the majority are medium, large and very large companies that are the trend setters, as well the ones most involved in international business.

As the charts in this article suggest, the role of distribution in international business activity remains fairly traditional. U.S. companies, especially the very large ones, are becoming increasingly involved with production and completely independent business activity. Except in the electronics industry, distribution departments have not yet been reorganized to reflect a greater involvement in offshore business activity. The organization of most distribution departments still reflects a domestic orientation.

Indeed, the general conclusions to be reached by looking at the charts in this article are:

1. Even large U.S. companies remain relatively disinterested and unsophisticated about international business activity;
2. Distribution departments have minimal involvement in international business, even exporting and importing;
3. There is a need for much more integration of distribution into the planning and operation of all phases of international business.

In addition to the objective survey of international distribution activity at 100 major companies, *DISTRIBUTION* also interviewed 12 top-level distribution executives to get their analysis and interpretation of present and future trends in international distribution.

The first question we asked these 12 executives was, "What are the major forces influencing your company's international business plans and strategies?" The most frequent answers were:

1. Continued high value of the dollar and its unfavorable effect on the price competitiveness of U.S. exports;
2. Worldwide recession and poor prospects for recovery in traditional foreign markets;
3. Increasing competition of foreign goods in both the U.S. and markets overseas;
4. Credit problems in a growing number of developing and less-developed countries (LDCs);
5. Increasing protectionism in virtually all foreign countries;
6. Pressure from foreign gov-

continued

ernments to invest in their countries in order to do business there;

7. Increasingly complex and restrictive export regulations from the U.S.government.

The second question we posed to these distribution executives was, "What have been, or will be, the strategic reactions of your company to these pressures?" In most cases, the executives interviewed said their companies were just beginning to react to these outside pressures, but that plans were fairly definite. There was a clear split among the attitudes of the companies on whether to become more involved internationally or to disengage themselves, at least temporarily, from more international business involvement.

The companies that seemed more cautious about international business activity tended to be consumer-product oriented. Shippers of industrial products and high-tech items were more aggressive about international activity. The most frequent answers given by the executives who said their companies were planning for greater international activity were:

1. Less reliance on straight exporting as the primary way to generate revenue from international business;

2. More joint ventures, especially in high-growth markets, to avoid protectionist barriers and assure access to these growing markets;

3. More direct investment in foreign subsidiaries, especially in developing countries and LDCs, to meet government demands, to gain access to sources of supply, and to deal with problems of international finance;

4. More foreign sourcing of parts and components, both to get lower cost goods and to gain access for exports back to the countries that are the sources of the components;

5. Much greater selectivity in foreign markets. Generally, more interest in the Far East because of its growth potential. Less interest in mature markets like Western Europe, and considerably less interest in the East Bloc. The degree of interest in developing countries and LDCs varies with the company and type of product, with capital goods manufacturers showing the most interest and consumer goods shippers showing the least.

6. Greater use of "third party"

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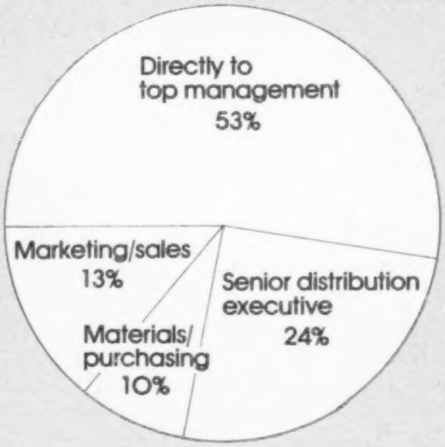
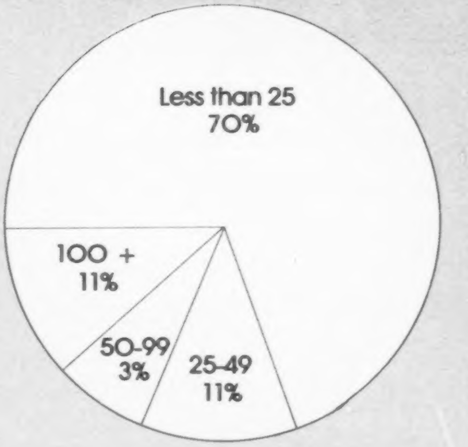
To Whom Does The International Distribution Function Report?



More than half of the respondents said the international distribution function reports directly to top management. Although this seems to indicate a very high level of consideration of international activities by top management, comments by many respondents puts it in another light. Practically all the departments that said they reported to top management were "corporate staff" departments that were not in the direct, day-to-day chain of command. This was also the case in the majority of 24 departments that said they reported to a senior distribution executive. These departments had "dotted-line" reporting relationships with other departments such as marketing, sales, production or operations. In the corporate hierarchy, however, they reported directly to an executive VP, an administrative VP or the president himself. More than a quarter of the companies, however, said that they reported to a "line" department such as marketing, sales, materials, purchasing, operations, or a line distribution department.

How Many Employees (professional) Are Directly Involved In The International Distribution Function At Your Company?



It is not surprising that relatively few people are involved in international distribution. As the chart indicates, fewer than 25 people were directly involved in international at the companies surveyed. The chart does not show that at nearly half the companies surveyed, the number was less than 10. All figures on this chart include those people who have dual domestic-international responsibilities. Comments by respondents indicates that at many companies they were including foreign personnel as well. Other comments by respondents suggest that the numbers have dropped in recent years and could well drop again in the near future.

intermediaries for exporting and importing. These include independent foreign agents, distributors and export trading companies.

The most important question we posed to these executives concerned the impact of their companies' strategies and plans on the international role of their distribution departments and the distribution professionals in those departments.

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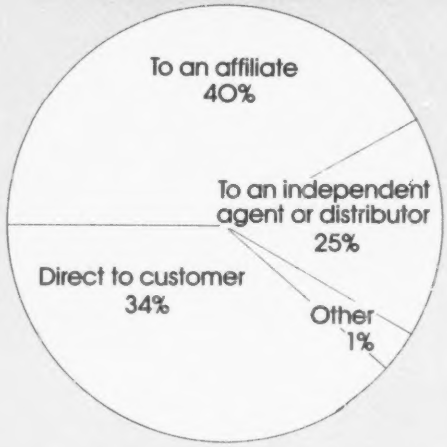
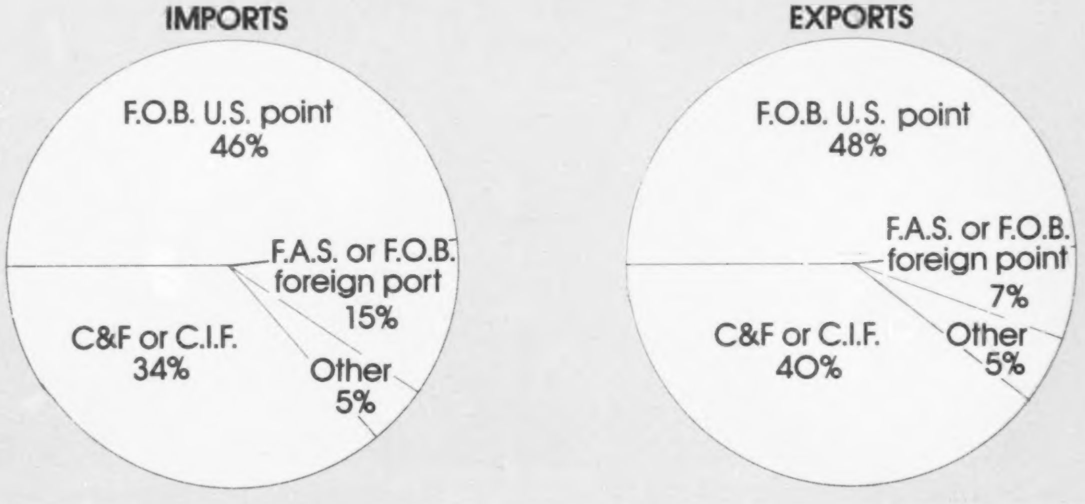
To Whom Do You Most Often Export?



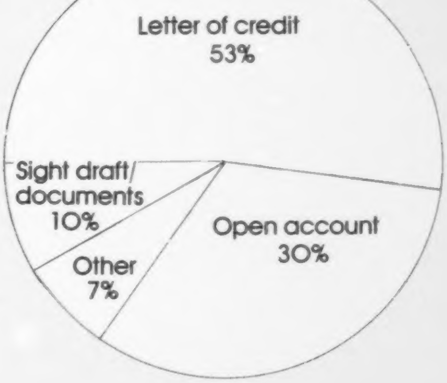
This chart clearly indicates the most common consignee for exports is another division or subsidiary. The significance of this chart is made more important by DISTRIBUTION surveys done in 1980 through 1982 in which this same question was asked. There has been a steady decline in direct shipments to foreign customers. In 1980 and 1981, this figure was around 50 percent. Now it is only 34 percent. The gains in shipments to affiliates suggests that more U.S. companies are taking a multinational approach to international distribution. There also has been a steady rise in exports to agents and distributors from a low of about 18 percent in 1980 to the present 25 percent. Companies use these third parties to avoid investment in expertise and to avoid risk of direct investment or involvement overseas. Respondents expected this trend to continue, which suggests that the actual international responsibilities for distribution managers would not increase at the same rate as international sales.

What Terms Of Sale Do You Use Most Often?



This chart may be the most significant in the whole survey. It clearly shows that terms of sale are used for exports and imports that minimize transportation and distribution responsibility of U.S. managers. In the case of imports, 80 percent of goods are purchased on a domestic-U.S. basis. More than a third of the time the goods arrive on a fully delivered C.I.F. or C&F basis, and in nearly half the cases they are delivered to a U.S. point (usually a port). Only 15 percent of the time are imports purchased the basis of a foreign origin. This does not necessarily mean that the U.S. distribution department only routes these shipments that are bought F.O.B. or sold on a delivered basis, as other charts will show. In the case of exports, the direct responsibility of U.S. managers is more apparent. About half the time the goods are sold at a U.S point, but in the other half of the cases, the goods are sold delivered to a foreign point, either at a port or at the ultimate destination. U.S. exporters are gradually using delivered terms of sale more often, according to the results of past DISTRIBUITON surveys; in 1980, for instance, F.O.B. U.S.-point terms of sale were used 55 percent of the time. Respondents in this survey say that they are finding that delivered terms of sale are important in competing in world markets.

How Are Most Exports Paid For?



Letters of credit continue to be the most important financial instrument for U.S. exporters. In previous DISTRIBUTION surveys, 49 to 52 percent saw them as the most popular form of payment for exports. The biggest changes in export financing, when the results of this survey are compared to those of earlier surveys of other forms of financing, is the declining popularity of open accounts. Open accounts were used by 41 percent of respondents in a 1980 survey, but that has dwindled to only 30 percent in this one. Even companies that are dealing with foreign affiliates have turned to letters of credit. Bank drafts and documents have fallen off in use as well, apparently because U.S. banks are less confident in the stability of foreign banks and currency. The "other" category includes cash in advance and more complex forms of payment such as barter or counter trade. Cash in advance has fallen off slightly according to earlier DISTRIBUTION surveys. U.S. companies would apparently like to be paid in advance but competitive pressure doesn't allow it. There are also slight indications that counter trade and barter are becoming a factor. This survey was the first time any companies had even mentioned these practices as a form of financing.

INTERNATIONAL TRENDS

First, we wanted to know the present patterns and probable trends that would occur within a year. Then we asked for the trends these executives saw within the next five years that would change how the distribution departments' people are involved with international activity.

The answers concerning the present and immediate-future trends were:

1. There will be little or no change to how distribution departments are involved in international activity. In most cases, international distribution responsibilities will be handled by a staff department that also handles domestic distribution duties.

2. Unless growth of international activity greatly exceeds present projections, there will be no staff increases. At some companies where foreign activity can be controlled autonomously or with third- party intermediaries, there may be cutbacks in U.S. staff;

3. Foreign subsidiaries and other overseas facilities will handle distribution and logistics functions with a great degree of independence from direct control of the U.S. distribution staff.

4. Placement of people with international distribution expertise in line departments such as production, marketing, materials and purchasing.

OUTSIDE SERVICES SELECTION RESPONSIBILITY

SERVICE	TRANSPORTATION/ DISTRIBUTION DEPT.	OTHER DEPT.	CUSTOMER SELECTS	DON'T USE
Freight Forwarder	83%	16%	1%	0
Customs Broker	75%	24%	1%	0
Ocean or Air Carrier	87%	12%	1%	0
Foreign Warehouse	50%	23%	3%	24%
Insurance	14%	86%	0%	0%
Bank	10%	88%	2%	0%

The majority of transportation decisions are still made by the transportation or distribution department for both exports and imports. The answers to this question included responses of "total responsibility or substantial decision making influence," so in cases where the foreign shipper or consignee and the U.S. company consult on a choice of carrier or service, the U.S. company was said to have responsibility. The companies in which distribution does not choose the freight forwarder, ocean carrier or air carrier are primarily importers, and these decisions were made by purchasing or materials people. At export-oriented companies, customs broker selection was often not handled by traffic or distribution. Purchasing, materials, customs, and marketing were the departments most often named to handle this job when distribuiton did not. Distribution selected foreign warehousing in only 50 percent of the cases. Other departments included purchasing, manufacturing, materials, finance, facilities, or marketing. Foreign customers have great influence in this decision. Distribution seems to have only slight influence in the selection of banks and insurance companies. These choices seem to be made primarily by departments such as controller, treasurer, finance, accounting, credit, and in the case of insurance, risk management or a similar specialized department.

The answers given to the longer range implications for distribution departments' international activity were:

1. Gradual integration of control of foreign operations with U.S. operations to include all distribution functions as well as related ones. The name of this department will probably not include the word distribution but may be called materials, logistics or just operations.

2. More use of foreign international distribution personnel in U.S. positions, and more rotation of U.S. personnel to overseas positions.

3. Gradual staff increases in areas of specialized expertise such as customs, international law, taxation, etc. ■